

# **CR TOPIC-WISE EXERCISES (700-800 LEVEL)**

# The 700-800 Club

## Critical Reasoning

### Critical Reasoning Topic 1: CONCLUSION

1. In the United States, about \$5,200 per person per year is spent on health care, while in Britain the amount is about half that. A recent study indicated that middle-aged white Americans have a significantly higher rate of diabetes and heart disease than do middle-aged white Britons. Even after eliminating from the study the lifestyle differences of diet, exercise, smoking, and drinking, the data showed that the Americans have poorer health than their British counterparts. *The statements above, if true, best support which of the following assertions?*
  - Health care spending in the United States should be reduced by 50%.
  - More expensive health care causes a higher incidence of certain diseases.
  - The money spent on health care in the United States is not being used effectively.
  - The average health care spending for middle-aged white Americans is probably less than the average health care spending for Americans in general.
  - Something other than diet, exercise, smoking, and drinking must account for the difference in health for the two groups in the study.
2. Spokesperson: In the 2006 election of the city mayor, 55% of the voters were female. All the voters were between ages 18 and 70 and 2/3 of them supported the incumbent mayor. The incumbent mayor won the election with a substantially greater number of votes than any other candidate. *If the statements made by the Spokesperson are true, then which of the following must be true?*
  - At least 1/2 of the female voters supported the incumbent mayor.
  - The incumbent mayor received stronger support from the female voters than from the male voters.
  - There were no other candidates in the election who received more than 30% of all the votes.
  - 45% of the voters in the election were male and none of them were 75 years old.
  - If the proportion of male and female voters in the city remains the same, the incumbent mayor is also likely to win the next election.
3. In 2003, the Making Hits Record Company spent 40% of its total budget on the production of ten albums, 30% of its budget on the marketing of these albums, and the remainder of its budget on overhead costs. In the same year, the Song Factory Record Company spent 20% of its total budget on the production of 10 albums and 60% of its budget on the marketing of these albums. Making Hits sold a total of 800,000 copies of the ten records it produced in 2003, while the Song Factory sold a total of 1,600,000 copies of the ten records it produced in 2003. *Assuming each company met its budget, which of the following conclusions is best supported by the information given above?*
  - The amount of money spent on marketing is directly related to the number of copies sold.
  - Making Hits spent more money on the production of its albums in 2003 than did the Song Factory.
  - Song Factory's total revenue from the sale of albums produced in 2003 was higher than that of Making Hits.
  - In 2003, Making Hits spent a larger percentage of its budget on overhead costs than did the Song Factory.
  - The Song Factory sold more copies of its 2003 albums than Making Hits did because the Song Factory spent a higher percentage of its budget on the marketing of its albums.
4. Due to high jet fuel costs, airline carriers are looking for new ways to increase revenues and thereby counteract declining profits. Airline A has proposed increasing the number of passengers that can fit on its airplanes by creating several standing room only "seats" in which passengers would be propped against a padded backboard and held in place with a harness. This proposal, since it relates to passenger safety, cannot be implemented without prior approval by the Federal Aviation Administration. *The above statements, if true, indicate that Airline A has made which of the following conclusions?*
  - The addition of standing room only "seats" will generate more revenue than the cost of ensuring that these seats meet safety standards.
  - The Federal Aviation Administration will approve Airline A's specific proposal.
  - The revenue generated by the addition of standing room only "seats" is greater than the current cost of jet fuel.
  - There are no safer ways in which Airline A can increase revenues.
  - Passenger safety is less important than increasing revenue.

5. A recent research study of undergraduate students analyzed the effects of music on human emotions. Each of the 200 participants attended at least 1 two-hour concert of classical music per week over the course of 12 weeks of their spring semester. At the end of the experiment, all of the students filled out a questionnaire assessing their emotional state. Based on the results of the questionnaires, all of the 10 students who attended the greatest number of concerts reported lower stress levels and higher satisfaction with their lives. Also, most of the 20 students who attended the fewest number of concerts reported below-average levels of emotional comfort. *Which of the following must be true based on the evidence presented above?*
- Most of the 200 participants improved their emotional state and lowered their stress levels.
  - During each week of the experiment, the participants spent at least 2 hours less on their academic work as a result of concert attendance.
  - Listening to classical music for at least 2 hours per week improves the emotional well-being of the majority of young adults.
  - More than 6 participants attended at least 14 concerts during the course of the experiment.
  - At least some of the students participated in the study in order to gain free access to classical concerts.
6. Columnist: The winner of this year's national spelling bee won by correctly spelling the spoken word *Ursprache*, which means "fame" in German. Given the richness of our language, why must we resort to words taken from modern foreign languages to challenge our best spellers? *Ursprache* is listed in our dictionary, as are words from many other foreign languages, but future spelling bees should limit themselves to words in our dictionary that have been anglicized in all aspects because spelling English words, not knowledge of linguistics and international phonetics, is the point of these contests. *Which of the following can most reasonably be inferred from the argument above?*
- The spelling contest winner knew how to spell most of the anglicized words in the dictionary.
  - Foreign words are more difficult than anglicized words for all contestants to spell.
  - Spelling contestant winners should be determined by their facility with all aspects of language.
  - To spell foreign words, contestants must recognize the language and know its pronunciation.
  - The English language contains more borrowed words than most other languages.
7. In Eastland, from 2000 to 2005, the total consumption of fish increased by 4.5 percent, and the total consumption of poultry products increased by 9.0 percent. During this time, the population of Eastland increased by 6 percent, in part due to new arrivals from surrounding areas. *Which of the following can one infer based on the statements above?*
- For new arrivals to Eastland between 2000 and 2005, fish was less likely to be a major part of families' diet than was poultry.
  - In 2005, the residents of Eastland consumed twice as much poultry as fish.
  - The per capita consumption of poultry in Eastland was higher in 2005 than it was in 2000.
  - Between 2000 and 2005, both fish and poultry products were a regular part of the diet of a significant proportion of Eastland residents.
  - Between 2000 and 2005, the profits of wholesale distributors of poultry products increased at a greater rate than did the profits of wholesale distributors of fish.
8. Everyone who has graduated from TopNotch High School has an intelligence quotient (IQ) of over 120. Most students with an IQ of over 120 and all students with an IQ of over 150 who apply to one or more Ivy League universities are accepted to at least one of them. *The statements above, if true, best support which of the following conclusions?*
- Every graduate of TopNotch High School with an IQ of 150 has been accepted to at least one Ivy-League school.
  - If a person is a high-school graduate and has an IQ of less than 100, he or she could not have been a student at TopNotch High School.
  - If a person has an IQ of 130 and is attending an Ivy-League school, it is possible for him or her to have graduated from TopNotch High School.
  - At least one graduate from TopNotch high school who has applied to at least one Ivy-League university has been accepted to one of them.
  - If a high-school graduate has an IQ of 150 and is not attending an Ivy-League school, then he or she did not apply to one of them.

9. According to a recent study on financial roles, one-third of high school seniors say that they have "significant financial responsibilities." These responsibilities include, but are not limited to, contributing to food, shelter, or clothing for themselves or their families. At the same time, a second study demonstrates that a crisis in money management exists for high school students. According to this study, 80% of high school seniors have never taken a personal finance class even though the same percentage of seniors has opened bank accounts and one-third of these account holders have bounced a check. *Which of the following conclusions can be properly drawn from the statements above?*
- High schools would be wise to incorporate personal finance classes into their core curricula.
  - At least one-third of high school seniors work part-time jobs after school.
  - The number of high school seniors with significant financial responsibilities is greater than the number of seniors who have bounced a check.
  - Any high school seniors who contribute to food, shelter, or clothing for themselves or their families have significant financial responsibilities.
  - The majority of high school students have no financial responsibilities to their families.
10. Analyst: Creative professionals, such as clothing designers, graphic designers, and decorators, often have very poor managerial skills and do not succeed when they try to run their own businesses. In fact, most of these creative types are less skilled in business than is the average white-collar professional who does not work in a creative field. Generally, creative talent and business acumen rarely go hand in hand. *If the analyst's argument is taken as true, which of the following statements can properly be concluded?*
- No successful businesspeople are creative.
  - Some creative types are not less skilled at business than is the average white-collar worker who is not creative.
  - Creativity precludes success in business.
  - Any white-collar worker who is not creative is more successful in business than any creative professional.
  - Business is not a creative endeavor.
11. Advocates insist that health savings accounts are an efficient method to reduce medical expenses. However, widespread adoption of these accounts will soon undermine the public's health. One reason for this is that most people will be reluctant to deplete their accounts to pay for regular preventive examinations, so that in many cases a serious illness will go undetected until it is far advanced. Another reason is that poor people, who will not be able to afford health savings accounts, will no longer receive vaccinations against infectious diseases. *The statements above, if true, most support which of the following?*
- Wealthy individuals will not be affected negatively by health savings accounts.
  - Private health insurance will no longer be available.
  - Most diseases are detected during regular preventive examinations.
  - Some people without health savings accounts are likely to contract infectious diseases.
  - The causal relationship between an individual's health and that person's medical care has been adequately documented.
12. Albinism is a rare genetic condition that inhibits the production of melanin, or pigmentation, in the skin and hair. People born with albinism are unusually susceptible to sunburn, melanoma, and a range of other health issues that are generally connected to excessive exposure to the sun. *The statements above, if true, provide the most support for which of the following conclusions?*
- People born with albinism develop other biological protections against melanoma and other sun-related health issues.
  - Humans with a high production of melanin can easily ignore health issues related to exposure to the sun.
  - When a non-albino person gets sunburn, the amount of melanin produced by that person decreases.
  - In humans, melanin plays a role in protecting the skin from developing sunburn and other sun-related ailments.
  - It is not possible for a person born with albinism to adopt other artificial protective measures against excessive exposure to the sun.

13. Celiac disease results from an inability of the digestive tract, specifically the small intestine, to absorb gluten, a protein found in wheat, barley, and certain other grains. The body's immune system attacks the gluten as if the protein were a harmful pathogen, often resulting in serious damage to the intestinal lining. People who suffer from celiac disease must eliminate gluten from their diets. Symptoms of the disease include abdominal cramps, bloating, and anemia. *If the statements above are true, which of the following assertions can be made on the basis of them?*
- Anyone who suffers from celiac disease will experience anemia.
  - Eliminating gluten from one's diet will cure celiac disease.
  - People experiencing abdominal cramps, bloating, and anemia have celiac disease.
  - Gluten is found only in grains.
  - The human body cannot always recognize harmless substances.
14. Mayville Airport and Newcomb Airport have the same number of flight departures each day. Mayville Airport experiences 26 departure delays per 100 flights, while Newcomb Airport experiences 20 departure delays per 100 flights. When delays caused by bad weather are disregarded, Mayville Airport has 5 fewer departure delays per 100 flights than Newcomb Airport does. *Which of the following conclusions is best supported by the information given above?*
- Bad weather causes a greater number of departure delays at Mayville Airport than at Newcomb Airport.
  - On average, the weather at Mayville Airport is worse than it is at Newcomb Airport.
  - Mechanical problems cause a greater number of delays at Newcomb Airport than at Mayville Airport.
  - The fleet of airplanes leaving from Newcomb Airport is better equipped to handle inclement weather than the fleet of airplanes leaving from Mayville Airport.
  - Mayville Airport experiences a greater number of arrival delays per 100 flights than Newcomb Airport does.
15. The head baker at Barry's Bagels can either purchase flour in-person from the local flour mill, Larry's Local Mill, or order a shipment of flour from an out-of-state mill, Isadore's Interstate Mill. The cost of the flour from Isadore's Interstate Mill is 10 percent less than the cost of the flour from Larry's Local Mill. Even after shipping and handling fees are added, it is still cheaper to order flour that has to be shipped from Isadore's than to buy flour locally from Larry's. *The statements above, if true, best support which of the following assertions?*
- Production costs at Isadore's Interstate Mill are 10 percent below those at Larry's Local Mill.
  - Buying flour from Isadore's Interstate Mill will eliminate 10 percent of the local flour mill jobs.
  - The shipping and handling fees for a batch of flour purchased from Isadore's Interstate Mill are less than 10 percent of the cost of an identical batch of flour purchased from Larry's Local Mill.
  - The shipping and handling fees for a batch of flour purchased from Isadore's Interstate Mill are more than 10 percent of the cost of Isadore's flour.
  - Isadore's Interstate Mill produces flour 10% more efficiently than Larry's Local Mill does.
16. Box office receipts for independent movies for the first half of this year have increased by 20 percent over the total receipts for independent movies for all of last year. Last year, 50 independent movies were released, while so far this year only 20 independent movies have been released. The number of independent movies slated for release in the second half of this year is roughly equal to the number released so far. *If the statements above are true, which of the following must be true?*
- The total box office receipts for independent movies this year will be significantly more than 20 percent greater than the receipts for independent movies last year.
  - The number of independent movies released in the first half of this year is equal to the number released in the first half of last year.
  - The price of a movie ticket has not increased since last year.
  - The average revenues of the independent films released during the first half of this year is greater than that of all independent films released last year.
  - The number of people seeing independent movies during the first half of this year is greater than the number who saw independent movies last year.

17. According to a recent magazine article, of those office employees who typically work 8 hours at the office each day but sometimes say that they will work at home on a particular day, 25 percent actually work less than one hour. At the same time, over 90 percent of those same office employees believe they are more productive working at home than working in their office. *The statements above, if true, best support which of the following conclusions about the office employees discussed in the article?*
- On average, the office employees working at home for a day work fewer hours than office employees working at the office.
  - 10 percent of the office employees are less productive working from home than working in their office.
  - At least 15 percent of the office employees do not define productivity exclusively in terms of the number of hours worked.
  - At least 25 percent of the office employees can complete the same amount of work in one hour at home as in 8 hours at the office.
  - Some of the office employees make statements regarding their productivity that are not in fact true.
18. On Monday, Daisy's Lemonade Stand sold lemonade at 20 cents per cup. The Lemon Shack sold lemonade at 30 cents per cup. At the end of the day, Daisy's Lemonade Stand and the Lemon Shack reported identical revenues and identical profits. *The statements above best support which of the following assertions?*
- On Monday, Daisy's Lemonade Stand sold fewer cups of lemonade than did the Lemon Shack.
  - The Lemon Shack sells higher quality lemonade than does Daisy's Lemonade Stand.
  - On Monday, Daisy's Lemonade Stand and the Lemon Shack incurred identical costs to run their businesses.
  - In general, lemonade consumers prefer the lemonade at Daisy's Lemonade Stand to the Lemonade at the Lemon Shack.
  - The Lemon Shack would not increase its revenues by lowering its prices.
19. Government restrictions have severely limited the amount of stem cell research American companies can conduct. Because of these restrictions, many American scientists who specialize in the field of stem cell research have signed long-term contracts to work for foreign companies. Recently, Congress has proposed lifting all restrictions on stem cell research. *Which of the following conclusions can most properly be inferred from the information above?*
- At least some foreign companies that conduct stem cell research work under fewer restrictions than some American companies do.
  - Because American scientists are under long-term contracts to foreign companies, there will be a significant influx of foreign professionals into the United States.
  - In all parts of the world, stem cell research is dependent on the financial backing of local government.
  - In the near future, American companies will no longer be at the forefront of stem cell research.
  - If restrictions on stem cell research are lifted, many of the American scientists will break their contracts to return to American companies.
20. As many as 98,000 people die each year due to medical error. In a campaign to reduce lethal errors, thousands of hospitals introduced six key changes, including rapid-response teams, re-checks of patient medication, and new guidelines for preventing infection. The campaign estimated that, over an 18-month period, more than 100,000 lives were saved as a direct result of the program. *Which of the following can be most properly inferred from the above statements?*
- Doctors and nurses should be more careful when doing their jobs.
  - The campaign saved all of the people who otherwise would have died due to medical error in that time period.
  - In the future, no one will die because of medical error.
  - If the campaign had not been implemented, more than 100,000 people might have died during the 18-month period due to medical error.
  - The key changes initiated by the campaign will continue to be implemented in the future.

21. Federal law prohibits businesses from reimbursing any employees for the cost of owning and operating a private aircraft that is used for business purposes. Thus, many American companies themselves purchase private aircraft. The vast majority of the business aviation fleet is owned by small and mid-size businesses, and flights are strictly for business purposes, with mostly mid-level employees on board. These companies and their boards of directors are in full compliance with the law and with what is best for their businesses. *Which of the following can be most properly inferred from the statements above?*
- The Federal law in question costs businesses money.
  - Most executives would rather fly on company owned planes than on commercial airlines.
  - Large businesses usually have their executives fly first or business class on commercial flights.
  - Upper level executives are less often in compliance with the law.
  - By not receiving any reimbursement for these flights, the mid-level executives on board are complying with the law.
22. Antoine: The alarming fact is that among children aged 19 years and younger, the number taking antipsychotic medicines soared 73 percent in the last four years. That is greater than the increase in the number of adults taking antipsychotic medicines during the same period.  
Lucy: But the use of antipsychotic drugs by adults is considered normal at the current rate of 11 adults per 1,000 taking the drugs. In contrast, the number of children on antipsychotic medication last year was 6.6 per 1,000 children. *Lucy's argument is structured to lead to which of the following as a conclusion?*
- The current level of antipsychotic drug use in children is abnormally high.
  - The fact that the number of children taking antipsychotic medicines increased 73 percent over the last four years is not an indication that the current level of use is abnormally high.
  - If only 6.6 out of every 1,000 children are taking an antipsychotic medication, the increase in the use of such medicines cannot be the percentage Antoine cites.
  - It is unlikely that the increase in the use of antipsychotic medicines by children will continue at the same rate.
  - If the number of children taking antipsychotic drugs is given as a certain number, the actual rate of such drug use is even higher.
23. The ability to analyze genomes — sequences of DNA — has grown more and more sophisticated. Scientists are able to examine the biological past in finer detail and with greater accuracy. A new analysis of the genetic links between early humans and chimpanzees has led to a hypothesis that the two species diverged more recently than previous estimates indicated. This gives credence to a very startling new theory: the ancestors of humans and chimpanzees might have hybridized to produce the lineage from which modern humans eventually developed. *What can be inferred from the statements above?*
- Hybridized species combine the best of both lineages.
  - Political and religious pressures will affect the course of future research.
  - Future research will enable scientists to determine the exact characteristics of this hybrid ancestor of modern man.
  - Earlier genome analysis established genetic links between early humans and chimpanzees.
  - Human DNA is more complex than that of chimpanzees.
24. The restaurant business wastes more energy than any other industry in the United States. Nearly 80 percent of the \$10 billion spent on energy by the restaurant industry each year is squandered by the use of inefficient equipment. At the same time, approximately 70 percent of restaurants in the United States are small businesses that are usually too cash poor to invest in energy-efficient technology. *Which of the following statements draws the most reliable conclusion from the information above?*
- The availability of energy-efficient equipment will reduce the energy costs of the restaurant industry by approximately 30 percent.
  - No industry in the United States spends greater than \$10 billion each year on energy.
  - By using energy-efficient technology, a small restaurant will reduce its expenses by a greater percentage than will a large restaurant.
  - Approximately \$2 billion of the amount spent on energy each year by the restaurant industry is not squandered.
  - The replacement of inefficient equipment represents the largest potential source of energy savings for the restaurant industry.

25. Under a new clean air proposal, the government has decided to tighten controls on the release of certain toxic chemicals, including benzene, formaldehyde, and other carcinogens, by chemical plants. The stated purpose of this proposal is to reduce cancers caused by air pollution. Yet, the chemical industry, rather than the government, is responsible for monitoring the implementation of the proposal. If the past actions of certain polluters in the chemical industry are any indication of future behavior, the net result of the new proposal will be an increase, rather than a decrease, in carcinogens released into the air. *The author is arguing that \_\_\_\_.*
- no chemical companies can be trusted to follow the clean air proposal
  - the chemical industry is responsible for releasing the majority of carcinogens into the air
  - allowing self-monitoring for the new clean air proposal will result in the opposite of its intended consequence
  - to ensure effective implementation, the government should always monitor the execution of its proposals
  - benzene and formaldehyde are two of the most hazardous cancer-causing chemicals
26. Since 1995, Congress has exempted oil companies that have leases issued by the federal government allowing them to drill for deep-water oil off the Gulf of Mexico from royalty payments as an incentive to spur development in times of low oil and gas prices. These leases were supposed to have included a provision that reinstates the royalties should the market prices of oil and gas exceed a certain level. Because of an error by the federal government, however, the language that reinstates the royalties is missing from the more than 1,100 leases issued by the U.S. government in 1998 and 1999. Since the market price of oil and gas has recently risen far above the threshold levels, this error could allow the oil companies to reap a windfall of more than \$10 billion through the life of the leases. In response, the government is pressuring the oil companies to renegotiate the leases. The executives of the oil companies strongly oppose renegotiation; all have issued statements stating that they expect the government to honor the terms of the contracts and that renegotiating a duly signed agreement would set a bad precedent. *Which of the following statements best reflects the position of the oil company executives?*
- Opportunity seldom knocks twice.
  - Do unto others as you would have done unto you.
  - One man's loss is another man's gain.
  - You don't change the rules in the middle of the game.
  - Revenge is so sweet.
27. Only those students who maintain 2.5 grade point averages are allowed to participate in school sports. Amy is captain of the school's tennis team, so she must have at least a 2.5 GPA. *Which of the following statements best summarizes the main point of the above argument?*
- Students who don't maintain a 2.5 GPA can't participate in sports.
  - Amy is a good tennis player.
  - The school should only require a minimum GPA of 2.0 to participate in sports.
  - Amy has earned at least the minimum GPA required to participate on a school sports team.
  - Amy wouldn't be captain of the tennis team if her GPA were lower.
28. Companies are often torn between the benefits of focusing on one major product or service and the drawbacks of relying too heavily on one primary source of income. While narrow focus can provide a company with an advantage over competitors that offer a wider range of products or services, an undiversified income stream can leave a company susceptible to major fluctuations in cash flow. We can see this tension realized when, for example, \_\_\_\_\_. *Which of the following best completes the passage below?*
- a local messenger service known for its speedy deliveries is forced to lay off twenty percent of its work force after a rise in local taxes encourages many local businesses to move out of state
  - an advertising agency loses one of its clients
  - a holding company that owns a car rental agency and a national doughnut chain is now interested in purchasing a professional basketball team
  - a construction company opts to use non-union labor to increase its profits
  - a specialty sandwich store decides to open franchises throughout the country that will focus on using local ingredients



29. Calorie restriction, a diet high in nutrients but low in calories, is known to prolong the life of rats and mice by preventing heart disease, cancer, diabetes, and other diseases. A six-month study of 48 moderately overweight people, who each reduced their calorie intake by at least 25 percent, demonstrated decreases in insulin levels and body temperature, with the greatest decrease observed in individuals with the greatest percentage change in their calorie intake. Low insulin level and body temperature are both considered signs of longevity, partly because an earlier study by other researchers found both traits in long-lived people. *If the above statements are true, they support which of the following inferences?*
- Calorie restriction produces similar results in humans as it does in rats and mice.
  - Humans who reduce their calorie intake by at least 25 percent on a long-term basis will live longer than they would have had they not done so.
  - Calorie intake is directly correlated to insulin level in moderately overweight individuals.
  - Individuals with low insulin levels are healthier than individuals with high insulin levels.
  - Some individuals in the study reduced their calorie intake by more than 25 percent.
30. Last January, in an attempt to lower the number of traffic fatalities, the state legislature passed its "Click It or Ticket" law. Under the new law, motorists can be pulled over and ticketed for not wearing their seat belts, even if an additional driving infraction has not been committed. Lawyers and citizens' groups are already protesting the law, saying it unfairly infringes on the rights of the state's drivers. Law enforcement groups counter these claims by stating that the new regulations will save countless additional lives. *Which of the following inferences is best supported by the passage above?*
- Prior to the "Click It or Ticket" law, motorists could not be stopped simply for not wearing a seat belt.
  - The "Click It or Ticket" law violates current search and seizure laws.
  - Laws similar to "Click It or Ticket" have effectively reduced traffic fatalities in a number of states.
  - The previous seatbelt laws were ineffective in saving lives.
  - Law enforcement groups, rather than citizens groups, should determine how to best ensure the safety of motorists.
31. In a certain state, hunting permits require the hunter to be at least 18 years old, possess a valid driver's license or state identification, and have completed a safety program within the past 5 years. The hunter must also sign a legal document pledging not to consume alcohol while hunting. *Which of the following can be correctly inferred from the above statements?*
- All states have the same requirements for hunting permits.
  - Hunters under the age of 21 don't need to sign the alcohol pledge because they are not legally allowed to drink alcohol under any circumstances.
  - If a person last completed the safety program six years ago, he will have to complete the program again before he can be eligible for a permit.
  - Someone who isn't 18 years old cannot obtain a hunting permit in this state.
  - Hunting is such a dangerous activity that state controls and requirements are necessary to ensure that nobody gets hurt.
32. The public often protests when an unregulated service industry is found to be corrupt. However, regulation often leads to increased costs for the consumer. Fewer companies survive in a regulated market, leading to decreased competition and higher prices. The public then responds negatively to the increased costs of these services. *The statements above best support which of the following?*
- Service industries should not be regulated.
  - The public should not protest unregulated services.
  - Only unregulated services are subject to public protest.
  - The public is sometimes the cause of its own complaints.
  - Decreased competition always leads to increased prices.
33. A certain medication used to treat migraine headaches acts by blocking pain receptors in the brain. When a person takes the medication within one hour after ingesting grapefruit or grapefruit juice, however, the effectiveness of the medication is significantly diminished. Researchers have determined that the grapefruit contains a compound that alters the shape of the pain receptors, with the result that the medication can no longer bind with them completely. *Which of the following conclusions could be most properly drawn from the information given above?*
- If one takes the medication more than an hour after ingesting grapefruit, its effectiveness is not diminished.
  - Ingesting grapefruit after taking the medication does not diminish the effectiveness of the medication.
  - There is only one type of pain receptor in the brain.
  - The medication is fully effective only when it properly binds with its target pain receptors.
  - It is not possible to design a medication for migraine headaches that can bond with the altered receptors.

34. Educator: Like any other difficult pursuit, music requires intense study and practice in order for one to become proficient. But many school music programs encourage only children who demonstrate early aptitude to continue studying music, while children who are not especially musical are directed towards other activities. Having learned to think of themselves as musically inept, these children do not devote any time to music and thus deprive themselves of the opportunity to develop a latent talent. ***The educator's statements, if true, would best support which of the following conclusions?***
- Music education should not devote special attention to talented students.
  - Everyone has the potential to learn music.
  - Talent is not always apparent at an early age.
  - Children are particularly sensitive to criticism from adults.
  - All children should study music.
35. Improved technology and equipment often result in fewer injuries during high-risk activities such as rock climbing and scuba diving. But participant education also plays a large role in reducing the number of injuries sustained during these activities. People who are poorly trained in these activities run a much higher risk of injury even if provided with the latest and best equipment. ***Which of the following can be properly inferred from the information above?***
- Training is a more important safety factor than equipment in high-risk activities.
  - People who are properly trained in their activities do not sustain injuries.
  - The safety benefits of the latest equipment can be offset by inadequate preparation.
  - Rock climbing and scuba diving are more risky than any other activities.
  - People with the latest equipment often neglect proper training.
36. The new heart scans offer patients significant benefits. They can be completed in a fraction of the time required for an angiogram, with no recovery time necessary. Furthermore, the scans are more sensitive and can identify problem areas that an angiogram might not perceive. However, heart scans use more radiation than most diagnostic procedures, and can cause undue concern over and treatment for the harmless abnormalities often picked up by such sensitive technology. ***Which of the following conclusions is best supported by the statements above?***
- A heart scan is safer than an angiogram procedure.
  - Patients should not be concerned about heart abnormalities that appear in a heart scan.
  - A heart scan could result in indirect harm by causing a patient to undergo risky, unnecessary procedures.
  - An angiogram is the more appropriate of the two procedures for most patients.
  - The heart scan is a more expensive procedure than the angiogram.

### **Critical Reasoning Topic 2: Assumptions**

1. To decrease the number of crimes in city Y, the city's Police Commissioner proposed taking some police officers from low-crime districts of the city and moving them to high-crime districts of the city. His proposal is based on city Y crime data that show that the number of crimes in any district of the city decreases when additional police officers are moved into that district. ***The Police Commissioner's proposal depends on which of the following assumptions?***
- City X experienced a drastic reduction in crime after implementing a proposal similar to that proposed by the Police Commissioner of city Y.
  - The severity of crimes committed in any district of the city decreases when additional police officers are moved into that district.
  - The number of crimes committed in all high-crime districts of city Y is more than triple the number of crimes committed in all low-crime districts of city Y.
  - There are more low-crime districts than high-crime districts in city Y.
  - Districts of the city from which police officers are removed do not experience significant crime increases shortly after the removal of those officers.

2. Although there has been great scientific debate for decades over global warming, most scientists now agree that human activity is causing the Earth's temperature to rise. Though predictions vary, many global warming experts believe that average global temperatures will rise between three and eight degrees Fahrenheit during the next century. Such an increase would cause an alarming rise in sea levels, displacing millions of people by destroying major population centers along the world's coastlines. *Which of the following is an assumption in support of the argument's conclusion?*
  - New technological developments in the next century will not divert rising seas from the world's coastal cities.
  - Individuals will not become more aware of the steps they can take to reduce the emission of greenhouse gases.
  - Rising sea levels similarly affect all coastal population centers.
  - Some global warming experts predict a greater than eight degree Fahrenheit increase in global temperatures during the next century.
  - Human activity is the sole cause of increasing global temperatures.
  
3. "The new HitItFar driver is the only golf club that uses space-age Titanium-Kryptonium alloy to strengthen its head. This driver is SO good, the last 12 winners of the major tour championships have all recently switched to it! Isn't it time for you to add power to your swing and distance to your drives? Trade in your old driver today — and HitItFar tomorrow!" *All of the following claims are either implied or made explicitly in the above advertisement EXCEPT:*
  - Switching to the HitItFar driver will improve your play.
  - The HitItFar driver helped the last 12 major championship winners achieve their victory.
  - Major championship winners are experts and know what constitutes a great golf club.
  - Your existing driver is inferior to the HitItFar driver.
  - Only HitItFar golf clubs have Titanium-Kryptonium alloy in the head of their drivers.
  
4. Researchers studying the spread of the Black Plague in sixteenth-century England claim that certain people survived the epidemic because they carried a genetic mutation, known as Delta-32, that is known to prevent the bacteria that causes the Plague from overtaking the immune system. To support this hypothesis, the researchers tested the direct descendants of the residents of an English town where an unusually large proportion of people survived the Plague. More than half of these descendants tested positive for the mutation Delta-32, a figure nearly three times higher than that found in other locations. *The researchers' hypothesis is based on which of the following assumptions?*
  - Delta-32 does not prevent a carrier from contracting any disease other than the Plague.
  - The Plague is not similar to other diseases caused by bacteria.
  - Delta-32 did not exist in its current form until the sixteenth century.
  - No one who tested positive for Delta-32 has ever contracted a disease caused by bacteria.
  - The Plague does not cause genetic mutations such as Delta-32.
  
5. The popular notion that a tree's age can be determined by counting the number of internal rings in its trunk is generally true. However, to help regulate the internal temperature of the tree, the outermost layers of wood of the Brazilian ash often peel away when the temperature exceeds 95 degrees Fahrenheit, leaving the tree with fewer rings than it would otherwise have. So only if the temperature in the Brazilian ash's environment never exceeds 95 degrees Fahrenheit will its rings be a reliable measure of the tree's age. *Which of the following is an assumption on which the argument above depends?*
  - The growth of new rings in a tree is not a function of levels of precipitation.
  - Only the Brazilian ash loses rings because of excessive heat.
  - Only one day of temperatures above 95 degrees Fahrenheit is needed to cause the Brazilian ash to lose a ring.
  - The internal rings of all trees are of uniform thickness.
  - The number of rings that will be lost when the temperature exceeds 95 degrees Fahrenheit is not predictable.
  
6. The Department of Homeland Security has proposed new federal requirements for driver's licenses that would allow them to be used as part of a national identification system. Using licenses for purposes not directly related to operating a motor vehicle is un-American because it would require U.S. citizens to carry the equivalent of "papers." Such a requirement would allow the government to restrict their movements and activities in the manner of totalitarian regimes. In time, this could make other limits on freedom acceptable. *The author assumes which of the following?*
  - The next presidential election will be dishonest, as has happened in eastern European countries.
  - The government will soon start curtailing the activities of those it considers "dissidents."
  - Blanket restrictions on law-abiding individuals are contrary to the traditions of American culture and law.
  - The majority of Americans are not willing to give up their right to travel and move about without identification.
  - Americans should resist all government regulation of their lives.

7. Since the new publisher took control, a news magazine's covers have featured only models and movie stars. Previously, the covers had displayed only politicians, soldiers, and business leaders. A leading gossip columnist claimed that the changes made the magazine relevant again. However, many newspaper editorials disagreed and suggested that the new publisher is more interested in boosting sales than in reporting important news events. *Which of the following is an assumption necessary for the argument made by the gossip columnist's opponents?*
- The charitable activities of models and movie stars often focus public attention on pressing problems.
  - Final authority for choosing the cover subject of the magazine lies with the publisher.
  - A magazine can boost sales while highlighting the coverage of important world leaders.
  - Some of the movie stars featured are now running for political office.
  - Magazine issues with models or movie stars on the covers are purchased at a rate more than three times greater than is the case with issues featuring politicians on the covers.
8. In response to the increasing cost of producing energy through traditional means, such as combustion, many utility companies have begun investing in renewable energy sources, chiefly wind and solar power, hoping someday to rely on them completely and thus lower energy costs. The utility companies claim that although these sources require significant initial capital investment, they will provide stable energy supplies at low cost. As a result, these sources will be less risky for the utilities than nonrenewable sources, such as gas, oil, and coal, whose prices can fluctuate dramatically according to availability. *The claim of the utility companies presupposes which of the following?*
- The public will embrace the development of wind and solar power.
  - No new deposits of gas, oil, and coal will be discovered in the near future.
  - Weather patterns are consistent and predictable.
  - The necessary technology for conversion to wind and solar power is not more expensive than the technology needed to create energy through combustion.
  - Obtaining energy from nonrenewable sources, such as gas, oil and coal, cannot be made less risky.
9. Surveys consistently show that the best-selling ice cream flavor is vanilla, although those who prefer chocolate rarely order vanilla. Vanilla-flavored candy, then, probably sells better than chocolate-flavored candy. *Which of the following is an assumption upon which the author of the argument relies?*
- Because someone prefers vanilla ice cream does not mean he prefers vanilla-flavored candy.
  - Children who prefer vanilla ice cream also tend to like chocolate candy.
  - Those who prefer neither vanilla nor chocolate ice cream also prefer other flavors of candy.
  - Someone who prefers vanilla ice cream may still order chocolate on occasion.
  - Preferences for certain ice cream flavors are similar to preferences for candy flavors.
10. The media claim that the economy is entering a phase of growth and prosperity. They point to lower unemployment rates and increased productivity. This analysis is false, though. The number of people filing for bankruptcy has increased every month for the last six months, and bankruptcy lawyers report that they are busier than they have been in years. *Which of the following is an assumption on which the argument depends?*
- Unemployment rates are not useful indicators of growth and prosperity.
  - Economic growth cannot be measured in terms of productivity.
  - Legislation has not been recently passed to make legal bankruptcy easier to obtain.
  - There has not been an increase in the number of bankruptcy lawyers.
  - The media often misrepresent the current state of economic affairs.
11. A newly discovered painting on wooden panel by Michelangelo must have been completed after 1507 but before 1509. It cannot have been painted earlier than 1507 because one of its central figures carries a coin that was not minted until that year. It cannot have been painted after 1509 because it contains a pigment that Michelangelo is known to have abandoned when a cheaper alternative became available in that year. *Which of the following is an assumption on which the argument depends?*
- No stocks of the abandoned pigment existed after 1509.
  - Michelangelo did not work on the painting over the course of several years.
  - The coin depicted in the painting was known to general public in 1507.
  - The wooden panel on which the painting was executed cannot be tested accurately for age.
  - Michelangelo's painting style did not change between 1507 and 1509.

12. In order to save money, some of Company X's manufacturing plants converted from oil fuel to natural gas last year, when the cost of oil was more than the cost of natural gas. Because of a sudden, unexpected shortage, however, natural gas now costs more than oil, the price of which has fallen steeply over the past year. The cost of conversion back to oil would more than negate any cost savings in fuel. So Company X's fuel costs this year will be significantly higher than they were last year. *Which of the following is an assumption on which the argument above depends?*
- Company X does not have money set aside for the increased costs of fuel.
  - The increase in the cost of fuel cannot be offset by reductions in other operating expenses.
  - The price of natural gas will never again fall below that of oil.
  - The cost of fuel needed by those of Company X's plants that converted to natural gas is not less than the cost of fuel needed by those plants still using oil.
  - The price of oil will not experience a sudden and steep increase.
13. Advertisement: Avian Oculars are the newest in binocular technology for the professional bird watcher. For a price comparable to that of traditional binoculars, Avian Oculars are specially designed with the features demanded by birding enthusiasts: they are lightweight, compact and extremely durable. So, use Avian Oculars on your next bird watching excursion, and see some of the world's rarest species in all of their beautiful plumage. *Which of the following is an assumption on which the author of the advertisement relies?*
- Avian Oculars weigh less than traditional binoculars.
  - Avian Oculars should be used only by bird watchers.
  - The reader will travel through the habitats of rare species during his or her next bird watching trip.
  - Avian Oculars are similar in cost to traditional binoculars.
  - Birding enthusiasts often determine the specifications of new products.
14. Every year many people become ill because of airborne mold spores in their homes. After someone becomes ill, specialists are often hired to eradicate the mold. These specialists look in damp areas of the house, since mold is almost always found in places where there is substantial moisture. If one wishes to avoid mold poisoning, then, one should make sure to keep all internal plumbing in good condition to prevent leakage that could serve as a breeding ground for mold. *Which of the following is an assumption on which the argument depends?*
- Mold itself does not create moisture.
  - Most homeowners know enough about plumbing to determine whether theirs is in good condition.
  - Mold cannot grow in dry areas.
  - No varieties of mold are harmless.
  - Mold spores cannot be filtered from the air.
15. The legislature of the Philippines voted recently to abolish the death penalty. In contrast, the death penalty remains legal in the United States. The difference in the legality of capital punishment demonstrates that the majority of American citizens believe in the death penalty, while the majority of Filipino citizens do not. *Which of the following is an assumption upon which the above argument depends?*
- There are more murders per year in the United States than in the Philippines.
  - The legal status of capital punishment in the United States and the Philippines aligns with how the majority of citizens in those respective countries view the death penalty.
  - There are not strong voices opposing the death penalty in the United States.
  - Most American citizens who believe in the death penalty think that it acts as a deterrent for potential criminals, while most Filipino citizens do not.
  - The legal standard used to determine whether a criminal should be sentenced to the death penalty in the United States is similar to the legal standard used in the Philippines before capital punishment was abolished there.
16. Smoking is a known cause of certain serious health problems, including emphysema and lung cancer. Now, an additional concern can be added to the list of maladies caused by smoking. A recent study surveyed both smokers and nonsmokers, and found that smokers are significantly more anxious and nervous than nonsmokers. *Which of the following is an assumption on which the argument rests?*
- Anxiety and nervousness can lead to serious health problems.
  - Anxiety and nervousness do not make individuals more likely to start smoking.
  - Equivalent numbers of smokers and nonsmokers were surveyed for the study.
  - Smokers are aware of the various health problems attributed to smoking, including lung cancer and emphysema.
  - Smokers who had smoked a cigarette immediately before responding to the survey were more anxious and nervous than smokers who had not smoked for several hours.

17. Over the past 5 years, Company X has posted double-digit growth in annual revenues, combined with a substantial improvement in operating margins. Since this growth is likely to persist in the future, the stock of Company X will soon experience dramatic appreciation. *The argument above is based on which of the following assumptions?*
- Company X has a large market share in its industry.
  - Prior to the last 5 years, Company X had experienced similarly dramatic growth in sales associated with stable or improving operating margins.
  - The growth of Company X is likely to persist in the future.
  - The current price of the stock of Company X does not fully reflect the promising growth prospects of the firm.
  - The stock of Company X will outperform other stocks in the same industry.
18. Antoine: The alarming fact is that among children aged 19 years and younger, the number taking antipsychotic medicines soared 73 percent in the last four years. That is greater than the increase in the number of adults taking antipsychotic medicines during the same period.  
Lucy: But the use of antipsychotic drugs by adults is considered normal at the current rate of 11 adults per 1,000 taking the drugs. In contrast, the number of children on antipsychotic medication last year was 6.6 per 1,000 children. *Lucy's argument relies on the assumption that \_\_\_\_\_.*
- normal levels of antipsychotic drug use are rarely exceeded.
  - the percentage of adults taking antipsychotic medication is always higher than the percentage of children on such medication.
  - the use of antipsychotic medication in children is no different from the use of such medications in adults.
  - Antoine is not consciously distorting the statistics he presents.
  - a rapid increase in the number of children taking antipsychotic drugs generates more fear of random violence by adolescents than does knowledge of the absolute number of children on such medications.
19. A recent article stated that only 5.5% of American colleges grant the majority of their degrees in the liberal arts. Citing this, a reader wrote to lament that this was further evidence of the decline of academic rigor in American post high school education. *Which of the following is an assumption on the part of the reader?*
- The percentage of American colleges granting liberal arts degrees would continue to drop.
  - All colleges should grant the majority of their degrees in the liberal arts.
  - Most post-secondary scientific, engineering, and vocational training does not involve as much academic rigor as liberal arts training.
  - Academic rigor is the most important aspect of post high school education.
  - Of the colleges that do not grant the majority of their degrees in the liberal arts, many granted fewer than a quarter of their degrees in the liberal arts.
20. Doctor: Research shows that adolescents who play video games on a regular basis are three times as likely to develop carpal tunnel syndrome as are adolescents who do not play video games. Federal legislation that prohibits the sale of video games to minors would help curb this painful wrist condition among adolescents. *The doctor's conclusion depends on which of the following assumptions?*
- The majority of federal legislators would vote for a bill that prohibits the sale of video games to minors.
  - Not all adolescents who play video games on a regular basis suffer from carpal tunnel syndrome.
  - Playing video games is the only way an adolescent can develop carpal tunnel syndrome.
  - Most parents would refuse to purchase video games for their adolescent children.
  - The regular playing of video games by adolescents does not produce such beneficial effects as better hand-eye coordination and improved reaction time.
21. Company X receives most of its revenues from the sale of gasoline through a network of gas stations that it owns across the country. The company purchases ready-for-sale gasoline from several oil refineries at wholesale prices and sells it to the final consumer at its gas stations. Over the next quarter, the management of Company X expects that the market price of gasoline will rise by approximately 10 percent. Therefore, the management projects that the next quarter's revenues from the sale of gasoline will also increase by approximately 10 percent. *The management's projection is based on which of the following assumptions?*
- Consumption of gasoline at the company's gas stations will not drop in response to higher prices.
  - Company profits will not decline below their current level.
  - Higher gasoline prices will not reduce the company's revenues from other business lines.
  - The costs of gasoline purchased by the company for subsequent sale at its gas stations will remain relatively constant.
  - The supply of gasoline is likely to decline over the next quarter.

22. An oil field prospector and developer reported a large oil deposit in southwestern Texas. As a result, a large oil and gas company purchased the field with the intention of drilling oil wells in the area soon afterwards. However, the company found that what had been reported to be a large oil deposit was actually much smaller than had been indicated. Thus, the methods that the prospector had used to determine the size of the oil deposit must have been inaccurate. *Which of the following is an assumption on which the argument depends?*
- The company's methods of measuring the size of the oil deposit were determined by a third party to be more accurate than those used by the prospector.
  - The prospector did not purposefully fabricate or misrepresent the size of the oil deposit.
  - Though smaller than originally thought, the oil deposit contained enough oil to make drilling commercially feasible.
  - The prospector did not explore other oil fields and use the same methods to determine the magnitude of the oil present, if any.
  - The company had successfully drilled for oil in other large oil fields in Texas throughout the early twentieth century.
23. Parent: The city education department is unable to distinguish between annoyances and important problems. For instance, prohibiting students from having cell phones is an overreaction. If a student uses one and thus interferes with instruction, confiscate it. All in all, we need educational leadership that can solve problems, not create them. *Which of the following is an assumption made by the parent?*
- Students having cell phones does not constitute an important problem for the city schools.
  - Students have no need for cell phones in school.
  - Faculty and staff should be allowed to possess cell phones.
  - Students need to have cell phones because some of them have no stay-at-home parent.
  - An interest in solving problems is the most important attribute of an educational leader.
24. The Ergonomic Society conducted a study that indicated that many people develop severe back problems during adulthood, and that virtually all such people who received chiropractic treatment showed great improvement. Therefore, in order to minimize the proportion of the population that suffers from back pain, the Ergonomic Society recommended that chiropractic treatment be directed toward those adults who suffer from severe back problems. *Which of the following is an assumption on which the argument depends?*
- Any person who receives chiropractic treatment for back pain may also benefit from other forms of treatment.
  - Large insurance carriers cover chiropractic care for back problems to a lesser degree than they do other medical treatments.
  - Individuals who receive chiropractic or other treatment prior to developing severe back problems are not less likely to develop back pain than those who do not.
  - Chiropractic treatment is more effective in treating severe back problems when utilized over a long period of time, as opposed to sporadically.
  - Severe back pain and other problems often cause individuals to miss workdays.
25. Since the new publisher took control, a news magazine's covers have featured only models and movie stars. Previously, the covers had displayed only politicians, soldiers, and business leaders. A leading gossip columnist claimed that the changes made the magazine relevant again. However, many newspaper editorials disagreed and suggested that the new publisher is more interested in boosting sales than in reporting important news events. *Which of the following is an assumption necessary for the argument made by the gossip columnist's opponents?*
- The charitable activities of models and movie stars often focus public attention on pressing problems.
  - Final authority for choosing the cover subject of the magazine lies with the publisher.
  - A magazine can boost sales while highlighting the coverage of important world leaders.
  - Some of the movie stars featured are now running for political office.
  - Magazine issues with models or movie stars on the covers are purchased at a rate more than three times greater than is the case with issues featuring politicians on the covers.

26. For-profit colleges serve far fewer students than either public or private non-profit colleges. At the same time, relative to non-profit colleges, for-profit colleges draw a disproportionate share of federal and state financial aid, such as tuition grants and guaranteed loans, for their students. It must be, then, that for-profit colleges enroll a greater proportion of financially disadvantaged students than do non-profit colleges. *The conclusion above depends on which of the following assumptions?*
- Public non-profit colleges and private non-profit colleges enroll a similar proportion of financially disadvantaged students.
  - For-profit colleges do not engage in fraudulent practices in helping their students obtain unneeded federal and state financial aid.
  - The number of students receiving federal and state financial aid at for-profit colleges is greater than the number of students receiving federal and state financial aid at non-profit colleges.
  - For-profit colleges are of similar educational quality as non-profit colleges.
  - The majority of students at for-profit colleges do not default on repayment of their loans after they complete college.
27. Recent research has indicated that married people are not only happier than unmarried people, but also healthier. This study has been widely reported by the media, with most commentators concluding that being married is good for one's health and attitude. *The conclusion of the media commentators depends on which of the following assumptions?*
- The longer people are married, the happier and healthier they become.
  - Married couples who had a large, extravagant wedding are happier than those who had a small, simple ceremony.
  - Married people cannot get depressed.
  - Single people with depression or health problems are just as likely to get married as are other single people.
  - Some marriages are more harmonious than others.
28. Country X imposes heavy tariffs on imported manufactured goods. Company Y has determined that it could increase its profits in the long term by opening a factory in Country X to manufacture the goods that it currently produces in its home country for sale in Country X. *For Company Y's determination to be true, which of the following assumptions must also be true?*
- Company Y will be able to obtain all the necessary permits to open a factory in Country X.
  - Company Y currently produces no goods outside its home country.
  - A sustainable market for Company Y's goods currently exists in Country X.
  - Company Y's home country does not impose tariffs on imported goods.
  - Labor costs in Country X are lower than those in Company Y's home country.
29. Country X imposes heavy tariffs on imported manufactured goods. Company Y has determined that it could increase its profits in the long term by opening a factory in Country X to manufacture the goods that it currently produces in its home country for sale in Country X. *For Company Y's determination to be true, which of the following assumptions must also be true?*
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  - A sustainable market for Company Y's goods currently exists in Country X.
  - Company Y's home country does not impose tariffs on imported goods.
  - Labor costs in Country X are lower than those in Company Y's home country.
30. When a company refuses to allow other companies to produce patented technology, the consumer invariably loses. The company that holds the patent can charge exorbitant prices because there is no direct competition. When the patent expires, other companies are free to manufacture the technology and prices fall. Companies should therefore allow other manufacturers to license patented technology. *The argument above presupposes which of the following?*
- Companies cannot find legal ways to produce technology similar to patented technology.
  - Companies have an obligation to act in the best interest of the consumer.
  - Too many patents are granted to companies that are unwilling to share them.
  - The consumer can tell the difference between patented technology and inferior imitations.
  - Consumers care more about price than about quality.



31. Inorganic pesticides remain active on the surfaces of fruits and vegetables for several days after spraying, while organic pesticides dissipate within a few hours after application, leaving the surface of the sprayed produce free of pesticide residue. Therefore, when purchasing from a farm that uses inorganic pesticides, one must be careful to wash the produce thoroughly before eating it to prevent the ingestion of toxins. But one need not worry about ingesting pesticides when purchasing from farms that use only organic pesticides. *The argument above assumes that*
- Consumers are aware of the origins of the produce they purchase.
  - Produce from farms that use organic pesticides reaches the consumer within hours after it is picked or harvested.
  - No farm uses both organic and inorganic pesticides.
  - No pesticide is capable of penetrating the skin of a fruit or vegetable.
  - The use of either type of pesticide does not increase the cost of produce.
32. The downturn in the economy last year has prompted many companies to make widely publicized layoffs, resulting in thousands of lost jobs. Economists predicted that these layoffs would cause people generally to cut back on their discretionary spending, even if their jobs were secure, in anticipation of coming hard times. However, this prediction has not come to pass, since there has been no increase in the amount of money set aside by the general public in savings accounts. *Which one of the following is an assumption on which the argument depends?*
- The economy has not improved in recent months.
  - There has been no increase in the amount of money invested in stocks, certificates of deposit, or other savings vehicles.
  - Salaries have decreased as a result of the economic downturn.
  - No business sectors have seen growth in recent months.
  - Those who were laid off have been able to find other employment.
33. Because most hospitals suffer a chronic undersupply of physicians, patients must sometimes wait hours in the emergency room to see a doctor. Nurses should therefore perform initial examinations in hospital emergency rooms to determine which patients merit immediate treatment and which can wait until the emergency physicians have more time to see them. *Which of the following is an assumption on which the argument above is based?*
- Hospitals should expand their medical staffs.
  - Physicians cannot be trained to perform initial examinations themselves.
  - Emergency rooms will run more smoothly if initial examinations are performed.
  - Hospitals are always fully staffed with nurses.
  - Nurses are competent to judge the severity of patients' conditions.
34. Scientists have discovered a new species of butterfly that lives only in a small region of Central America and is active only at night. During the day, it rests in treetops, where its green color matches the foliage perfectly. Therefore, the scientists must have discovered the butterfly at night. **The argument depends on which of the following assumptions?**
- The newly discovered butterfly is not related to any other species of butterfly.
  - There is no way for the scientists to detect the butterfly during the day.
  - No other butterfly species lives in this region of Central America.
  - The foliage in the butterfly's habitat is completely green.
  - The butterfly cannot survive in areas outside of Central America.

### Critical Reasoning Topic 3: WEAKEN

1. A certain baseball team has just completed its season. In stadiums that seat 20,000 or fewer people, the team averaged 1 home run per game; in stadiums that seat between 20,000 and 40,000 people, the team averaged 2 home runs per game; and, in stadiums that seat 40,000 or more people, the team averaged 3 home runs per game. Obviously, the excitement of playing in front of large crowds motivated the team to hit more home runs. *Assuming that all stadiums during the season were filled to capacity, which of the following, if true, most undermines the argument above?*
- The team's leading home run hitter hit more home runs in mid-sized stadiums than in large stadiums.
  - The fans in the larger stadiums often cheered against the team.
  - The team averaged only 2 home runs per game when playing in the league's largest stadium.
  - In order to create seating for the additional fans, the outfield walls in the larger stadiums were constructed closer to home base.
  - The team's announcer cited crowd noise as a major motivator for the team.

2. The recent decline in the employment rate was spurred by predictions of slow economic growth in the coming year. However, those predictions would not have affected the employment rate if it had not been for the lack of capital reserves of major industries. So if major industries increase their capital reserves, the employment rate will not decline in the future. *Which of the following, if true, casts the most doubt on the validity of the argument above?*
- Major industry foresaw the drop in employment.
  - Some major industries had appreciable capital reserves.
  - An increase in labor costs could adversely affect the employment rate.
  - The government could pass legislation mandating that major industries set aside a fixed amount as capital reserves every year.
  - The drop in the employment rate was more severe this year than last.
3. Farmers in developing countries claim that the United States government, through farm subsidies, is responsible for the artificially low global price of wheat. Because the U.S. government buys whatever wheat American farmers are unable to sell on the open market, American farmers have no incentive to modulate the size of their crops according to the needs of the global market. As a result, American farmers routinely produce more wheat than the global market can absorb and the global price of wheat is kept low. Without these subsidies, the farmers in developing economies claim, American farmers would produce only the amount of wheat that they could sell on the open market and the global price of wheat would rise. *Which of the following, if true, most weakens the claims of the farmers in developing countries regarding the price of wheat?*
- Wheat that is not processed for consumption is often used for certain industrial applications.
  - Non-governmental buyers of wheat and wheat products are able to predict how much wheat they will need several years in advance.
  - The United States government offers similar subsidies to soybean farmers, though the global price of soybeans is significantly higher than that of wheat.
  - Other countries, such as Canada and Russia, are likely to produce more wheat if the United States were to reduce its output.
  - The price of sorghum, a crop for which the United States government offers no subsidies, is lower than that of wheat.
4. The amount of money estimated to be lost by Hollywood studios due to DVD piracy overseas increased to more than \$500 million last year. As a consequence, Hollywood studios have little prospect of making money this year by exporting their films worldwide. *All of the following, if true, weaken the argument except:*
- \$500 million represents a very small fraction of overseas profits.
  - New laws and heightened international enforcement aimed at this piracy were implemented in January of this year and have been effective.
  - Even in countries where DVD piracy is widespread, theatrical first-run distribution is both very popular and profitable.
  - Last year, all films that were nominated for an Academy Award were known to have been pirated on DVD.
  - Domestic DVD sales were sharply higher last year; in the past, strong domestic sales have been an indicator of higher international DVD sales in the following year.
5. Political Analyst: Because our city is a border city, illegal immigration is an important issue in the current race for mayor. Of the two candidates for mayor, one supports a plan that would attempt to deport the city's 9,000 illegal immigrants and the other does not. Surveys consistently show that about 60% of the city's residents are opposed to the plan, while about 35% are in support of the plan. Therefore, the candidate who does not support the plan will win the election for mayor. *All of the following statements weaken the analyst's argument, EXCEPT:*
- In the city at issue, most voters make their voting decisions based on the candidates' positions on abortion.
  - Of the 35% of residents who support the plan, some are willing to consider alternate plans for addressing illegal immigration.
  - Many of the residents who oppose the plan are not registered voters.
  - The candidate who supports the plan is the incumbent mayor, and has been elected to four consecutive terms despite taking controversial positions on many important issues.
  - Just under 30% of the city's residents are illegal immigrants who cannot vote.

6. Adam will spend \$4,000 to rent a booth at the town's annual county fair to promote his new Sandwich Shoppe. In previous years, the average food booth at the fair served 400 customers. Thus, in order to cover his costs, Adam has calculated that he must sell 400 sandwiches for \$10 each. *Which of the following statements casts the most doubt on Adam's chances of breaking even at the county fair?*
- Adam should not limit himself to 400 sandwiches; he should be prepared to sell more.
  - Adam has not factored in the costs of raw materials or labor in calculating the amount of revenue he needs to generate to break even.
  - If booths in previous years averaged 400 customers, that means some booths served more than 400 and some served fewer than 400.
  - Many people prefer other types of food to sandwiches.
  - If Adam shares his booth, and the cost of the rental, with a complementary business, he will not have to sell as many sandwiches to break even.
7. The people of Prohibitionland are considering banning the service of alcoholic beverages in restaurants to curb unruly behavior on the part of its residents. Proprietors of restaurants in Prohibitionland are protesting the ban on the grounds that it will reduce their revenues and profits. However, several provinces in Prohibitionland enacted restrictions on alcoholic beverages last year, and the sales taxes paid by the restaurants in those provinces rose by an average of 50 percent. In contrast, the sales taxes paid by restaurants located in areas of Prohibitionland that did not have any restrictions rose by an average of 30 percent. *Which of the following, if true, supports the restaurant proprietors' economic stance against the ban?*
- In the provinces that restricted alcoholic beverages, there was a short-term negative impact on restaurant visitation in the beginning of last year.
  - The sales tax in Prohibitionland is lower on food and beverages than it is on other consumer goods, such as clothing.
  - The consumption of alcoholic beverages in Prohibitionland has been on a gradual decline the last 20 years.
  - The restrictions on alcoholic beverages enacted last year allowed for the service of drinks beginning around dinnertime each evening.
  - Overall sales tax revenue did not increase at a substantially higher rate in the provinces that enacted the restrictions on alcoholic beverages than in the rest of Prohibitionland last year.
8. Recently, some critics of the U.S. government have pointed out that this country is the only advanced industrialized nation without a national vaccine laboratory and suggested that this lack makes the American public more vulnerable than other developed nations to infectious diseases, such as avian flu. A government official said these critics were disloyal and thus wrong about the public's vulnerability. To support his claim, the official cited the generally long life span and low infant mortality of United States citizens, relative to all United Nation member nations. Mentioning the high quality of American hospitals, he added that all of the Europeans that he knew preferred to undergo major medical treatments in the United States rather than in the socialized medical systems in place in their home countries. *All of the following are weaknesses or potential weaknesses in the official's argument EXCEPT:*
- The high quality of hospitals in the United States is not a factor affecting the public's vulnerability to infectious disease.
  - Whether or not the critics are disloyal has no bearing on whether or not they are wrong.
  - The Europeans that the official cited are a demographically narrow sample, overwhelmingly composed of wealthy males over the age of fifty.
  - The average life span of United States citizens is determined not only by deaths due to infectious diseases but also by deaths due to all other causes.
  - Comparing the United States to all United Nations member nations does not address the concern that the U.S. is behind other advanced industrialized nations in a particular way.

9. Experts estimate that insurance companies' tardiness in paying doctors for legitimate medical claims adds approximately 10 percent in overhead costs for physicians. Insurance companies counter that the tardiness sometimes results from billing errors made by the doctors themselves. Since dealing with these billing errors costs the insurance companies time and money, it is clear that insurance companies do not have a significant economic incentive to delay claim payments to doctors. *Which of the following pieces of information, if true, weakens the conclusion above?*
- Some doctors who submit accurate bills to insurance companies still receive tardy payments.
  - The cost to the insurance companies to process incorrect bills from doctors' offices is roughly equivalent to the increased costs that physicians accrue as a result of tardy payments from insurance companies.
  - A rising proportion of medical claims submitted by doctors to insurance companies are deemed illegitimate by those insurance companies.
  - The billing errors made by doctors' offices are typically very minor, such as the submission of a claim with an outdated patient home address.
  - The overhead costs incurred by doctors as a result of delayed insurance payments result in an increase in the premiums paid by consumers to health insurance companies that far exceeds any increase in the fees paid to doctors by insurance companies.
10. Of the people who moved from one state to another when they retired, the proportion who retired to SunState has decreased by 10 percent over the past five years. Since many local businesses in SunState cater to retirees, this decline is likely to have a noticeably negative economic effect on these businesses. *Which of the following, if true, most seriously weakens the argument?*
- SunState attracts more people who move from one state to another when they retire than does any other state.
  - There are far more local businesses in SunState that cater to tourists than there are local businesses that cater to retirees.
  - The number of retirees who have moved out of SunState to accept re-employment in other states has increased over the past five years.
  - SunState has lower property taxes than any other state, making the state a magnet for retirees.
  - The total number of people who retired and moved to another state for their retirement has increased significantly over the past five years.
11. Market Analyst: Recent research confirms that the main cause of bad breath is bacteria build-up on the tongue. The research also concludes that tongue scrapers, when used properly, can eliminate up to 40% of the bacteria from the tongue. As the effectiveness of tongue scrapers becomes more widely known, the market for less effective breath freshening products, such as mints, gums, and sprays, will decline significantly. *Which of the following provides the best evidence that the analyst's argument is flawed?*
- Some breath freshening products are advertised to eliminate up to 30% of the bacteria from the tongue.
  - Tongue scrapers have already been on the market for a number of years.
  - Many dentists recommend regular flossing, and not the use of the tongue scraper, to combat bad breath.
  - A recent survey shows that 94% of those who regularly purchase breath freshening products are aware of the effectiveness of the tongue scraper.
  - Some people buy breath freshening products for reasons other than to fight bad breath.
12. Companies that offer "employer sponsored insurance" (ESI) pay a portion of employees' health care costs. In the manufacturing sector last year, companies that offered ESI had worker absentee rates 22% lower, on average, than those at companies that did not offer ESI. *If, on the basis of the evidence above, it is argued that ESI decreases worker absenteeism, which of the following, if true, would most seriously weaken that argument?*
- Results similar to those cited for the manufacturing sector have been found in other sectors of the economy where ESI is offered.
  - At companies that offer ESI, employees have access to preventative health care such as regular check-ups, routine laboratory tests, and nutrition counseling.
  - Because initiating an ESI plan requires a lot of paperwork for the company, employees, and the insurance provider, doing so is complex and time-consuming.
  - Many firms in the manufacturing sector have improved workplace safety and decreased the occurrence of on-the-job injuries in the last five years, and most of these companies introduced ESI at the same time.
  - In manufacturing firms where ESI is offered, the average productivity is 2% higher than it is in those firms where workers are not covered by an ESI plan.

13. Studies have shown that an automobile that runs on a blend of 85% ethanol/15% gasoline gets better mileage than an otherwise similar car equipped with a gasoline engine. Many American legislators have concluded that an increase in tax incentives for ethanol production would lessen our dependence on foreign oil. *Which of the following, if true, casts the most doubt upon the validity of the legislators' conclusion?*
- It takes 1.5 gallons of oil to produce 1 gallon of ethanol.
  - Electric cars are cheaper to operate than cars running on the ethanol fuel mix.
  - It costs thousands of dollars to retrofit an automobile to run on the ethanol fuel mix.
  - The ethanol/gasoline blend emits more pollution than regular gasoline.
  - The ethanol/gasoline blend has not been widely adopted in Europe.
14. The American Revolution arose partly in response to British general search warrants, which gave arbitrary and intrusive powers to government officers. Thus, the founders created the Fourth Amendment to protect against unreasonable and warrant-less intrusions of privacy by a powerful and partisan federal government. During the 20th century, countless dictators have used arbitrary and intrusive surveillance to monitor and suppress dissidents. Any democracy that does not enforce equally extensive protections will systematically suppress dissent. *Which of the following, if true, best weakens the argument?*
- The United Kingdom's parliamentary system does not have such extensive protections but has never systematically suppressed dissent.
  - Many dictators have been very beneficial and constructive leaders for their countries.
  - Many democracies have haphazardly used surveillance to monitor dissidents and suppress dissent during times of war.
  - Some dictators have been supported by the United States.
  - At least some countries in the former Soviet Union now have democratic elections but still suppress dissent.
15. A researcher studying corporate executives found that they tend to have "take charge" personalities, with the predominant traits of assertiveness, decisiveness, and self-confidence. The researcher concluded that people who are more "take charge" than the average person are more likely to become corporate executives. *Which of the following, if true, most seriously weakens the researcher's conclusion?*
- Holding the job of a corporate executive causes people to develop "take charge" personality traits.
  - When working on charitable or community projects, corporate executives often use their ability to make decisions and lead people to make those projects successful.
  - Some people who are not executives have stronger "take charge" personalities than some people who currently serve as corporate executives.
  - Many people who aspire to become executives exhibit different management styles in their current jobs.
  - The executives that the researcher studied were often unsuccessful when they tried to manage their family activities as they do their business activities.
16. Because of a rare type of fungus that killed off many cacao trees in Brazil, there was an unusually meager harvest of cacao beans this year. The wholesale price of cocoa solids and cocoa butter has increased significantly and is unlikely to fall in the foreseeable future. As a result, the retail price of chocolate is certain to increase within six months. *Which of the following, if true, most seriously weakens the argument above?*
- Consumers will purchase other sweets if the price of chocolate increases.
  - Researchers have discovered an effective method to kill the fungus.
  - Dark and bittersweet varieties of chocolate will be affected more seriously than milk varieties.
  - The price of chocolate has decreased steadily for three years.
  - Most chocolate in stores is manufactured from cocoa that was purchased two years earlier.
17. A recent survey conducted in the New Homes magazine indicated that more than 70% of its readers are planning to purchase or build a new home over the next two years. Based on the results of the survey, the editor of the magazine concluded that over the next two years, the real estate industry is likely to experience rapid growth driven by the high market demand for new homes. *Which of the following statements, if true, would be the most damaging to the conclusion of the magazine's editor?*
- The survey included over 50,000 respondents representing all major age categories.
  - The survey was mailed to all the subscribers of the magazine and included prepaid postage to facilitate returning the questionnaire.
  - Readers of the New Homes magazine are much more likely to be interested in buying or purchasing a home than the rest of the public.
  - The number of the magazine's readers has more than doubled over the past 2 years.
  - All survey respondents received one free issue of the magazine as a token of appreciation for filling out the survey.

18. Most water companies in the United States add fluoride to tap water to help prevent cavities. Some dentists argue, however, that this practice actually causes more harm than good because people overestimate the protection afforded by the fluoride and do not take the proper steps to care for their teeth, such as brushing and flossing after every meal. If water companies did not add fluoride, the dentists claim, people would be forced to be more active in their dental hygiene and tooth decay would decline as a result. *Which of the following, if true, most weakens the dentists' claims?*
- Fluoride is widely used in commercially available dental care products.
  - Most Americans are not aware that fluoride is added to tap water.
  - Annual visits to the dentist are the most effective means of controlling tooth decay.
  - The United States has the lowest rate of tooth decay in the world.
  - Most Americans already brush their teeth daily.
19. Recently in City X, developers have stopped buying land, contractors have found themselves going without work for longer periods, and banks have issued fewer mortgages. There must be fewer new residents moving to City X than there were previously. *Which of the following indicates a flaw in the reasoning above?*
- This year several housing blocks have gone on the market after being held up for months by legal red tape.
  - The average size of a new home has increased significantly over the past several years.
  - Re-sales of condominiums have increased over the past six months.
  - The cost of materials such as lumber and cement has decreased over the past year.
  - Sales of other big-ticket items, such as automobiles and boats, has remained steady over the past year.
20. On average, the number of speeding tickets issued in County X every year is three times greater than the number of speeding tickets issued in County Y during the same period. Therefore, the number of people who exceed the speed limit must be higher in County X than in County Y. *Which of the following describes a flaw in the reasoning above?*
- The argument fails to take into account that the speed limit may be different in the two counties.
  - The argument fails to take into account that the number of tickets issued in County X may reflect a lower proportion of drivers overall in that county.
  - The argument fails to take into account that a single driver can receive more than one ticket in a given year.
  - The argument fails to take into account that residents of County Y may be more law-abiding overall.
  - The argument fails to take into account that residents of County X may not be aware of the speed limit in that county.
21. The principal of School X has proposed a plan that would add an hour-long study period to the end of the school day. She claims that the extension would improve the school's average score on the math section of the state assessment by allowing students more time to complete math homework that they wouldn't otherwise have time to complete. *Which of the following statements, if true, would most weaken the argument presented above?*
- Math teachers of students in School X have noted an overall decline in the number of homework assignments completed by students since the school eliminated midday study periods two years ago.
  - Administrators from neighboring School Y recently implemented a school day extension and have seen no significant improvement in student test scores on the state assessment.
  - Music department faculty members at School X strongly oppose the plan because they feel any time added to the school day should be used to bolster the music curriculum.
  - Parents of students from School X have expressed concern that the proposed schedule change would interfere with students' extracurricular activities.
  - The core components of School X's math curriculum are not aligned with the topics tested on the state math assessment.
22. The anticipated retirement of tens of thousands of baby boomers will create an unprecedented opportunity to move significant numbers of people into career-track jobs at family-supporting incomes. Major industries, from health care and construction to automotive repair, will soon face deep shortages of workers as a result of projected growth and boomer retirements. Fortunately, many of these jobs have relatively low barriers to entry and could be filled by out-of-work young people. To achieve this result, the city government should convene employers and educators to determine how best to create paths of upward mobility in these fields. *Which of the following, if true, most weakens the argument?*
- Immigration reform will limit the pool of available workers.
  - Government efforts have been shown to affect employment trends only rarely.
  - The best available positions require skills not possessed by the vast majority of the unemployed.
  - A small proportion of baby boomers will not retire as soon as is anticipated.
  - Many out-of-work young people are unaware of these looming employment opportunities.

23. According to a recent research study, more than 90% percent of graduates of private high schools in a certain county continue their education in college. By contrast, only 65% of graduates of public high schools subsequently pursue college education. Therefore, if parents in the county wish to increase the likelihood that their children will attend college, they should send them to private rather than public schools. *Which of the following statements would most seriously weaken the argument above?*
- Graduates of private schools typically score higher on standardized tests and other tests of academic achievement.
  - While private schools are typically very expensive, attendance of public school is free for the residents of the county.
  - In comparison with graduates of private schools, a substantially greater proportion of public school graduates receive need-based financial aid for their college education.
  - In comparison with private schools, public schools provide more opportunities for student involvement in sports and other athletic activities, which almost always increase the likelihood of students' acceptance to colleges.
  - Since most public schools are located in rural areas of the county populated primarily by farmers, nearly 30% of students from public high schools choose to pursue farming occupations rather than apply to colleges.
24. Two years ago, the cost of the raw material used in a particular product doubled after an earthquake disrupted production in the region where the material is mined. Since that time, the company that makes the product has seen its profit margins decline steadily. Aiming to improve profit margins, the company's head of engineering has decided that he must find a new source for the raw material. *Which of the following, if true, would cast the most doubt on the validity of the head of engineering's decision?*
- New competitors have entered the market every six months for the past two years, resulting in price wars that have progressively driven down revenues across the market.
  - Although the earthquake occurred two years ago, the region's mines have still not recovered to pre-earthquake production capacity.
  - There are several other regions in the world where the raw material is mined, but those regions do not produce as much of the raw material as the current source region.
  - The company could use a completely different raw material to make its product.
  - Recent advances in mining technology will make mining the raw material much more efficient and cost-effective in the future.
25. The current administration and Congress have once again practiced bad public policy in failing to increase Pell grants or at least limit their reduction for next year's budget. Pell grants improve access to higher education for those who have historically been disadvantaged in our society by financial or other life circumstances, thereby helping recipients elevate themselves to the middle class. Without that access, the gap between the rich and poor in this country will continue to widen, increasingly straining the stability of our democracy. *Which of the following, if true, most seriously weakens the conclusion of this argument?*
- Total spending on programs targeted at improving access to higher education for disadvantaged students will increase in next year's federal budget.
  - The neediest candidates for Pell grants often lack information about their eligibility for such grants.
  - Congress recently authorized a bill that will increase after-school programs in urban communities.
  - On average, an individual Pell grant funds less than 15% of the full cost of attending a four-year college or university.
  - Federal spending on education for next year will increase as a percentage of the total budget.
26. Investment Advisor: It is well-known that investing in mutual funds reduces portfolio risk through diversification. It is also true that past investment performance is often related to future investment prospects. Therefore, to help my clients earn high returns with low risk, I select a group of mutual funds that meet the client's objectives and then invest the client's assets in the fund that has delivered the highest returns in this group over the past 2 years. *Which of the following statements, if true, would demonstrate a serious flaw in the approach of the Investment Advisor?*
- Managers of many mutual funds that have delivered the highest returns over the past several years have already used up their best investment ideas and are unlikely to sustain this level of performance in the future.
  - Mutual funds span a wide spectrum of investment styles and performance objectives and no single fund is suitable for every investor.
  - Many individual investors choose to manage their own portfolios rather than consult an investment advisor.
  - The funds that have had the strongest past performance tend to continue to outperform other funds with similar objectives for many years in the future.
  - The number of clients served by the investment advisor has declined by nearly 50% over the past 5 years.

27. Joe: The sign on this garden says "Do Not Pick The Flowers."  
Sally: You are right. But there are a lot of flowers here. Picking just one will not hurt.  
Joe: That is not true. If everyone thought that way and picked a flower, the garden would be destroyed.  
Joe's response to Sally is questionable because \_\_\_\_\_.  
  - it ignores the possibility that there may be circumstance where destroying the garden is justified
  - it is circular in reasoning
  - it contradicts itself by pointing out that collective action has a different result than does an individual action
  - it cites the consequence of everyone performing an action rather than that of Sally's action itself
  - it attacks Sally's character in order to undermine her credibility
28. Consumer advocates argue that the coating found on non-stick cookware contains harmful chemicals that are released into the air when the cookware is heated above a certain temperature. The manufacturer of the cookware acknowledges this hazard but assures consumers that the temperature threshold is much higher than would ever be needed for food preparation and therefore no special precautions need be taken in using the cookware. *Which of the following, if true, would cast the most serious doubt on the claims of the manufacturer?*  
  - The chemicals released by the coating can linger in the air for days
  - Empty cookware left on the flame often reaches exceptionally high temperatures.
  - Several consumers have already claimed illness as a result of using the cookware.
  - The manufacturer did not test the cookware for this phenomenon until consumer advocates brought the issue to its attention.
  - There are effective non-stick coatings that do not release toxins when heated.
29. Unlike juvenile diabetes, which is a genetic condition present from birth, type-2 diabetes is acquired in adulthood, generally as a result of obesity and inactivity. The number of cases of type-2 diabetes has been steadily increasing in the United States since 1970, indicating to many researchers that the American population is becoming increasingly heavy and sedentary. If the government wishes to stem the spread of the disease, it should educate the public about the dangers of an inactive, calorie-laden lifestyle and promote healthful diets and exercise. *Which of the following, if true, provides the strongest reason to believe that the proposed education program will NOT be effective?*  
  - School health programs already educate middle-school students about the issue.
  - The public already has access to this information through the Internet.
  - Food companies encourage the public to indulge in unhealthful snacks.
  - The government has not set aside money for such a program.
  - Healthful foods and exercise programs are beyond the financial means of many people.
30. Absenteeism among employees has decreased steadily over the past several years. Two possible explanations have been offered. First, improved health insurance has allowed employees to maintain better health. Second, improved working conditions have improved morale, leading to less desire to avoid work. However, since absenteeism has also decreased at companies with poor or no health insurance and poor working conditions, one must conclude that the cause of the decrease is the increased tendency of employers to deduct missed days from employees' paychecks. *Which of the following indicates a flaw in the reasoning above?*  
  - Employees who lack health insurance often have low morale.
  - Companies with poor working conditions are most likely to deduct pay for missed work days
  - Most employees are not honest about the reasons that they miss work
  - The definition of absenteeism is not clear
  - Improved health care, improved working conditions, and fear of losing money are not the only possible explanations for decreased absenteeism



31. Recently, many critics of the U.S. government have pointed out that this country is the only industrialized nation without a national vaccine laboratory and suggested that this lack makes the American public more vulnerable than other advanced nations to diseases such as avian flu or other flu epidemics. When asked at a press conference, a government official said these critics were disloyal and thus wrong about the public's vulnerability. To support his claim, he cited the international pre-eminence of American doctors and hospitals as well as the middle ranking of the United States among United Nation member nations in the health categories of infant mortality, life span, and nutrition. He also added that all of the Europeans that he knew preferred to undergo major medical treatments in the United States rather than in the socialized medical systems in place in their home countries. *All of the following are flaws in the official's logic EXCEPT:*
- The official accepts that the quality of physicians and hospitals is a major factor, albeit not the only one, affecting the public's vulnerability to disease.
  - The critics could be disloyal but not wrong.
  - The Europeans that the official cited are overwhelmingly wealthy males over the age of fifty.
  - The official relies on health statistics that are based on a complete accounting of deaths, injuries, and illnesses suffered by the American public from all causes, including the ten percent attributable to infectious diseases.
  - The UN health ranking that the official cited is based on an almost complete survey of the nations of the world.
32. During the recent spate of brushfires in the Southwest, homeowners who lived near affected areas were advised to douse their roofs with water to prevent their houses from catching fire, before evacuating the area. After the fires were brought under control and the homeowners were allowed to return to the area, many who doused their roofs discovered significant fire damage to their houses. Clearly, then, dousing their roofs was a wasted effort. ***Which of the following, if true, would most weaken the conclusion above?***
- The houses of owners who did not douse the roofs with water suffered appreciably more fire damage than did those of owners who did douse the roofs with water.
  - Not all homeowners who doused their roofs did so to the same extent.
  - The fire insurance rates for those who doused their roofs did not increase after the fire.
  - The houses that suffered the least damage were those in which the owners remained and continuously doused the roofs.
  - Most of the homeowners who doused their roofs had been through a brushfire evacuation before.
33. For years, the debate over public education reform has centered on financing. Many claim that pouring more money into the public schools will improve student performance. However, the only way to fix our school systems is to inject new ideas and new approaches. Today the schools are organized to benefit their adult employees rather than the students. ***Which of the following, if true, best weakens the argument?***
- Schools that have instituted "new approaches" attract the best performing students.
  - Schools without outside playgrounds have lower levels of student performance than schools that do.
  - Studies show that student performance corresponded most directly with the education of the students' families.
  - School employees, by an overwhelming margin, said that the system performed well, citing superior benefits than those available in comparable private institutions.
  - Researchers in education have shown that students from school districts with high per-capita spending tend to receive higher scores on standardized tests.
34. Company X conducted a taste test to determine whether its new soft drink had a good chance of commercial success. A sample of consumers was asked to compare the flavor of the new soft drink to that of an established brand without knowing the true identity of either beverage. Overwhelmingly, the consumers preferred the taste of the proposed soft drink to that of the established brand. Clearly, Company X has a good chance of commercial success with its new soft drink. ***Which of the following, if true, would most seriously weaken the argument above?***
- Some of the consumers in the taste test preferred the flavor of the established brand.
  - The other soft drink used in the taste test is also manufactured by Company X.
  - The new soft drink will cost more than three times as much as any other soft drink on the market.
  - Company X has not yet designed a label for the new soft drink.
  - The name of the new soft drink is very close to that of the established brand.

35. Math education in this country does a disservice to our children. In the lower grades, it should focus on the basic skills that students will need in higher grades to develop the ability to solve complex problems. Learning basic math skills is like learning the scales and chords that one will later use to master complicated concertos and symphonies. However, math educators in this country seem to have it backward, emphasizing in higher grades the same narrow, skills-based approach that students learned in lower grades rather than the analytical tools they will need to solve complex math problems. **Which of the following, if true, would most seriously weaken the conclusion drawn above?**
- While music is common in elementary school curriculums, it is rarely taught in high school.
  - On international tests of math skills, high-school students in this country performed no worse than did their counterparts from countries where problem-solving is emphasized in higher grades.
  - When presented with a math problem to solve, students in higher grades are more likely to arrive at different answers than students in lower grades are.
  - Older students tend to receive higher grades in math than do younger students.
  - Universities in this country report a steady increase in the percentage of native first-year students who qualify to take advanced mathematics courses such as calculus.
36. The recent boom in new home construction has finally begun to taper off. Developers are not buying land, contractors are finding themselves going without work for longer periods, and banks are issuing fewer mortgages. People must not be as interested in buying new homes as they were even six months ago. **Which of the following indicates a flaw in the reasoning above?**
- Interest rates for home mortgages have increased significantly over the past six months.
  - The average size of a new home has increased significantly over the past several years.
  - Sales of condominiums have increased over the past six months.
  - The cost of materials such as lumber and cement has decreased over the past year.
  - Sales of other big-ticket items, such as automobiles and boats, has remained steady over the past year.
37. Researchers have noticed that people whose blood shows abnormally low levels of calcium usually have laryngeal polyps, which can permanently damage vocal cords and result in partial or even total loss of voice. In order to prevent the polyps, the researchers recommend a diet high in calcium-rich foods such as dairy and green, leafy vegetables. **Which of the following, if true, most strongly suggests that it would not be advisable to follow the researchers' recommendation?**
- Dairy contains compounds that are difficult for many people to digest.
  - Laryngeal polyps sometimes disappear without treatment.
  - Laryngeal polyps cause a change in body chemistry that blocks the absorption of calcium.
  - Fresh vegetables are not always available in all seasons.
  - Low levels of calcium can sometime be remedied with vitamin pills.

#### **Critical Reasoning Topic 4: STRENGTHEN**

1. The United States government uses only a household's cash income before taxes to determine whether that household falls below the poverty line in a given year; capital gains, non-cash government benefits, and tax credits are not included. However, yearly cash income is not a fool-proof measure of a given household's disposable income. For example, retirees who live off of capital gains from an extensive portfolio could earn hundreds of thousands of dollars, yet be classified by the government as living in "poverty" because this income is not included in the calculation. **Which of the following, if true, validates the contention that the government's calculation methods must be altered in order to provide statistics that measure true poverty?**
- For more than 99% of those classified as living in poverty, yearly cash income comprises the vast majority of each household's disposable income.
  - While the government's calculation method indicated a 12.5% poverty rate in 2003, the same calculation method indicated anywhere from a 9% to a 16% poverty rate during the preceding decade.
  - Most established research studies conducted by the private sector indicate that the number of people truly living in poverty in the U.S. is less than that indicated by the government's calculation method.
  - Several prominent economists endorse an alternate calculation method which incorporates all income, not just cash income, and adjusts for taxes paid and other core expenses.
  - The government's calculation method also erroneously counts those who do not earn income in a given year but who have substantial assets on which to live during that year.

2. Historically, the drug industry promoted its products to physicians by educating them in their offices or at industry conferences. In the last 10 years, it has become much more commonplace for drug companies to advertise prescription drugs directly to consumers, via television advertising and other media. Some public health advocates have become concerned that patients, encouraged by advertising, may pursue the use of prescription drugs that may be inappropriate for the individual patient or situation. However, since physicians must prescribe these medications, there is no reason for such concern. *Which of the following pieces of information would be most helpful in addressing the concern articulated by the public health advocates?*
- Certain over-the-counter medications are as effective for many common medical conditions as more powerful nonprescription medications.
  - Prescription medication television advertisements directed at the general public only appear on certain programs and are not seen by many potential consumers.
  - Physicians are also subject to prescription drug advertisements that are directed toward consumers.
  - Physicians are not susceptible to pressure from patients in determining appropriate courses of treatment, including drug prescriptions.
  - Prescription medicines have been proven to be safe and effective treatments for many patient conditions.
3. Studies in restaurants show that the tips left by customers who pay their bill tend to be larger when the bill is presented with the server's name hand-written on the bill. Psychologists hypothesize that simply seeing a hand-written name makes many consumers feel more of a personal identification with the server, encouraging larger tips. *Which of the following, if true, most strongly supports the psychologists' interpretation of the studies?*
- The effect noted in the studies applies to patrons paying with either credit cards or cash.
  - Nametags for servers have not been shown to have any effect on the size of the bill.
  - Greeting card companies have found that charities which send holiday cards with handwritten signatures are more likely to receive donations than those which send cards with printed signatures.
  - The studies indicated much larger average tips if the customer ordered alcoholic beverages with his or her meal.
  - Many of the restaurants in which the studies were conducted are located in tourist areas, where people are traveling for leisure activities.
4. Analyst: The pace of technological development brings a constant stream of new devices to the market, and many of them enjoy commercial success. But announcing new technology too soon after the introduction of a successful device can backfire. Once consumers hear about the new device, they may stop buying the one currently on sale. So, if a company wishes to announce the upcoming sale of a new device, it should wait until purchases of the old device have begun to decline. *Which of the following, if true, would best support the analyst's main assertion?*
- New technology often becomes less expensive after an initial surge in sales.
  - Media outlets, such as television programs and magazines, often report on the planned introduction of new devices while the sales of old devices are still strong.
  - Many consumers are unable to determine whether new technology is superior to current technology.
  - Surveys have shown that some consumers make only one or two technology purchases per year, whereas others make more frequent purchases.
  - Consumers tend to be loyal to technology companies whose products they enjoy using.
5. More and more companies have begun to consume less energy by making themselves more efficient. Over time, these efforts could place the United States at the forefront of an emerging global market for cleaner technologies. Such efforts are also essential to tackling the two big energy-related issues of the age: global warming and the dependence on precarious supplies of oil. The federal government should encourage these efforts by providing the necessary incentives, whether as loans, direct grants or targeted tax breaks. *Which of the following, if true, provides the most effective support for the argument?*
- On the average, Canadian companies are more energy efficient than those in the United States.
  - Experts believe that energy efficiency could lower the energy use of the United States to the level of 1995.
  - In the past, government incentives have made advances in energy conservation feasible, especially in the auto industry.
  - The dependence on foreign oil is a greater problem in the present than global warming.
  - The market for cleaner technologies is currently relatively small because of the infrastructure requirements.

6. State X recently decided to cut state funding for the public library system in County X. To help counteract this cut in funding, the county library system has increased library late fees from \$.10 per day to \$.12 per day. Since the fee increase, library administrators have seen no decline in the number of overdue books. The director of the county library system concludes that the fee hike has helped to counteract the cut in state funding. *Which of the following statements, if true, most strengthens the director's claim?*
- Since the fee increase, library administrators have noted a significant decrease in the number of books borrowed each day.
  - The library system incurred minor costs to make its visitors aware of the late fee increase.
  - Since the fee increase, there has been no significant change in the average number of days that books are overdue before they are returned.
  - The library system in County X tracks its books through a very advanced database system, allowing library administrators to have access to very accurate statistics on the number of overdue books at any given time.
  - Since the reduction in state funding, the library system in County X has eliminated 10% of its staff, creating a 2% reduction in costs.
7. In the 18th and 19th centuries, it was believed in many coastal American cities that the waterfront was an undesirable location for residential buildings. As a result, much of the waterfront in these cities was never developed aesthetically and instead was left to industry and commerce. Today, however, waterfront properties are generally seen as prestigious, as evidenced by the large sums paid for homes along the beach front. A developer who wishes to make a large profit would be wise to buy urban waterfront lots and erect residential buildings on them. *Which of the following, if true, most strongly supports the claim made about urban waterfront properties?*
- People today have more money, relatively speaking, to spend on real estate than they did in previous centuries.
  - Homeowners will be willing to spend large sums on residential properties in traditionally industrial or commercial districts.
  - Many urban waterfront lots are available for purchase.
  - Many coastal American cities are encouraging developers to rehabilitate the waterfront through tax incentives.
  - Properties in interior residential districts in coastal American cities are significantly more expensive than those along the waterfront.
8. Charter schools are independent public schools that are given greater autonomy in exchange for increased accountability. Charter school operators are freed from many of the regulations of the traditional public school bureaucracy, thereby allowing them to pursue more innovative educational ideas than non-charter public schools can pursue. At the same time, charter schools are held accountable for achieving specific educational outcomes and are closed down if those outcomes are not met. *Which of the following, if true, best supports the assertion that students attending charter schools will, on average, perform better on assessments of writing ability than students attending traditional public schools?*
- Students who attend schools that emphasize order and discipline perform worse on assessments of writing ability than students who attend schools that do not emphasize order and discipline.
  - The majority of students who score in the 99th percentile on assessments of writing ability attend charter schools.
  - Public schools that operate outside of the traditional public school bureaucracy spend more time teaching students writing than do traditional public schools.
  - Students who attend schools that are allowed to experiment with their writing curricula perform better on assessments of writing ability than students who attend schools that have less flexible curricula.
  - There are far more students attending non-charter public schools than students attending charter schools.
9. Officials of the Youth Hockey League and parents of players in the league have become concerned with the number of flagrant fouls occurring during league games. This past season, the number of flagrant fouls was double the number from the season before. League officials plan to reduce the number of such fouls during the coming season by implementing mandatory suspensions for players who commit flagrant fouls. *Which of the following statements, if true, provides the best evidence that the officials' plan will be effective?*
- Most serious injuries occurring during league games are a direct result of flagrant fouls.
  - League referees have been trained to recognize flagrant fouls and to report incidents involving such fouls.
  - Parents of players in the league are in support of mandatory suspensions for flagrant fouls.
  - A similar league suspends players for committing flagrant fouls; this league has a relatively low incidence of flagrant fouls when compared with the Youth Hockey League.
  - Most players in the league strive to be selected for the All-Star team, and league rules state that no player with a record of suspension shall be selected for the All-Star team.

10. Almost every modern kitchen today is equipped with a microwave oven, mainly because microwave ovens offer a fast and convenient way of cooking and reheating food. Indeed, it has become a standard appliance in most households. Studies have shown, however, that microwave ovens are not completely safe and their use has occasionally resulted in serious injury. Because of this, some consumer advocates argue that microwave ovens should not be so readily accepted as a standard appliance until they can be certified to be completely safe. *Which of the following, if true, would most strengthen the argument of the consumer advocates?*
- Microwave ovens have taken much of the joy out of cooking.
  - There have been many reported incidences of people who have been scalded by liquids superheated in microwave ovens.
  - Absolute safety is the only criterion by which an appliance should be judged to be acceptable as "standard."
  - There is no such thing as a completely safe appliance.
  - Stoves and ovens that use natural gas consume energy much more efficiently than microwave ovens.
11. One feature of the global food economy is the simultaneous import and export of the same items, a phenomenon known as "redundant trade." In California, for example, domestic cherries are exported to Canada and Japan, while a nearly equivalent number of cherries are imported from Chile, Italy, and Germany. California also exports and imports nearly identical amounts of lettuce and almonds. Although shipping fresh fruits and vegetables is an expensive undertaking, there is a justifiable economic rationale for redundant trade. *Which of the following, if true, most strongly supports the conclusion above?*
- Establishing international ties through trade facilitates access to other desired goods that are more efficiently produced abroad.
  - Undertaking free trade with one's political allies helps to maintain international goodwill.
  - In recent years, consumers in California boycotted domestic cherries, demanding better working conditions for agricultural laborers in the state.
  - Local growers could sell their products at a premium in domestic markets.
  - The economic globalization of redundant trade allows for the sharing of cultural norms and values.
12. Wide dissemination of wireless networks in cities is a practical way to meet the needs of city households, schools and businesses. Rural communities have found that wireless networks are both more reliable and cheaper than land-based networks. *Which of the following would most likely be cited by a supporter of the argument?*
- Urban areas do not pose additional problems for the effective operation of wireless networks.
  - Wireless networks work far better where population density is low.
  - Iceland, a very rural country, successfully uses wireless networks.
  - The expenses of wireless transmission in areas with large buildings is much higher.
  - Poor neighborhoods have less access to cable internet than do educators or businesses.
13. Surveys reveal that the vast majority of hotel guests in the United States resent the high prices of the items in the mini-bars in their hotel rooms. These guests would prefer to have an empty refrigerator in their rooms in order to have space to put their own food and beverages, although a large percentage of these guests would still make at least one purchase from their in-room mini-bar. After analyzing the results of the study, the management of Hotel T decided that it would be more profitable to eliminate the mini-bar and install empty refrigerators in each room. *Which of the following, if true, would support Hotel T's plan to increase profitability by eliminating in room mini-bars in favor of empty refrigerators?*
- There is currently some space available in Hotel T's in-room mini-bars for guests to put their own items.
  - Hotel T is located in the United States.
  - Some guests of Hotel T do not make any purchases from their in-room mini-bars.
  - The money that Hotel T makes from the mini-bar purchases of its guests is less than the money that Hotel T loses from discarding mini-bar items that have not sold by their expiration dates.
  - It will cost Hotel T less money to maintain empty refrigerators in its guest rooms than to maintain stocked mini-bars in those rooms.

14. There is only one major road, Freeway Z, that links County X and County Y. The border of the two counties is primarily defined by a mountain range, over which the construction of new roads is severely restricted by environmental laws. A cost-effective solution to the problem of traffic congestion on Freeway Z is to build a commuter train tunnel through the mountain range. The successful implementation of this plan would cost far less than expanding the existing freeway and would also reduce the number of cars clogging the roads in both counties. *Which of the following, if true, could proponents of the plan above most appropriately cite as a piece of evidence for the soundness of their plan?*
- An effective commuter train tunnel between the counties would require major investment in mass transit within both counties.
  - The majority of all vehicles on the nation's freeways are traveling from one state to another.
  - 60% of the cars on Freeway Z are driven by people who live in County Y and work in County X.
  - Many new freeways are being built in areas that are presently served by commuter trains.
  - A large proportion of the vehicles on Freeway Z are commercial trucks carrying transcontinental shipments.
15. In January of last year, Fastfood King started using a new lowfat oil to cook its Fast Fries, instead of the less healthful corn oil that it had been using. Now Fastfood King is planning to switch back, saying that the change has hurt sales of Fast Fries. However, this claim is incorrect, since according to Fastfood King's own sales figures, Fastfood King sold 10 percent more Fast Fries last year than in the previous year. *Which of the following, if true, most strongly supports the argument against Fastfood King's claim?*
- Total sales of all foods at Fastfood King's locations increased by less than 10 percent last year.
  - Fastfood King enjoys higher profit margins on its Soft Drinks than it does on Fast Fries.
  - Fastfood King's customers prefer the taste of Fast Fries cooked in corn oil to Fast Fries cooked in lowfat oil.
  - The number of customers that visited Fastfood King locations was more than 20 percent higher last year than the year before.
  - The year before last, Fastfood King experienced a 20 percent increase in Fast Fries sales over the previous year.
16. The West Indian manatee, a distant relative of the elephant, returned to the sea some 50 million years ago. These thousand-pound herbivores inhabit the warm coastal waters where Americans like to play. Despite conservation efforts, criminal penalties for harming these creatures, and an overabundance of SAVE THE MANATEE! bumper stickers, none of these animals can be considered safe. *Which of the following, if true, most strongly supports the argument above?*
- Last year, several manatees were mysteriously killed by an unidentified toxin.
  - All manatees swim at depths that make them vulnerable to the blades of motorboat engines.
  - Most tourists are unaware of the ongoing efforts to save the manatee.
  - The population of manatees in the wild has dwindled to fewer than 2,500 animals.
  - Although dozens of manatee deaths are documented each year, many more deaths go unreported.
17. Betting on sports, even for small stakes among friends, is a form of gambling. Therefore, no police officer should ever bet on sports. *Which of the following, if true, most strengthens the conclusion that no police officer should ever bet on sports?*
- Gambling is illegal in many states and countries.
  - Some people who bet on sports are convicted criminals.
  - People who bet on sports sometimes can ill afford to lose the amounts they wager.
  - No police officer should ever gamble.
  - Many philosophers consider gambling to be immoral.
18. Ethanol is a derivative of corn and other grains. When burned as fuel, it emits significantly lower levels of carbon monoxide, a major atmospheric pollutant, than does gasoline. For that reason, environmentalists claim that ethanol is a better source of energy than gasoline. *Which of the following, if true, most strongly supports the environmentalists' claim?*
- When burned as fuel, ethanol does not release any pollutants at higher levels than does gasoline.
  - Ethanol is comparable in price to gasoline.
  - Available supplies of corn are sufficient to supply several years' worth of ethanol.
  - Most gasoline companies already possess the technology to produce ethanol.
  - Ethanol can be used as heating fuel.

19. Medical education in the United States has focused almost exclusively on curative medicine, while preventive care has been given scant attention. This is misguided. Medical schools should invest as much time in teaching their students how to prevent illness as in teaching them how to cure it. *Which of the following, if true, most strengthens the argument above?*
- Many contagious diseases can be prevented with vaccines.
  - In 1988, for every three cents the United States spent on prevention, it spent 97 cents on curative treatment.
  - The number of students enrolled in medical school is the highest it has ever been.
  - More people die each year from disease than from accidental causes.
  - As the population grows, the number of doctors in certain specialties has not been keeping pace.
20. Some animals, such as dolphins, dogs, and African grey parrots, seem to exhibit cognitive functions typically associated with higher-order primates such as chimpanzees, gorillas, and humans. Some parrots, for example, have vocabularies of hundreds of words that they can string together in a comprehensible syntax. This clearly shows that humans and primates are not the only animals capable of using language to communicate. One parrot, named Alex, has been known to ask to be petted or kissed and will exhibit aggression if the gesture offered is not the specific one requested. *Which of the following, if true, would most strengthen the conclusion above?*
- Dolphins can be trained to assist divers in ocean rescues.
  - Gorillas in captivity often learn hand signals for food and water.
  - Dogs are capable of sensing their owners' moods and often exhibit concern if they sense sadness.
  - Chimpanzees can memorize long sequences of key punches on machines that dispense food.
  - Alex does not exhibit aggression when offered a gesture that he specifically requested.
21. To prevent overcrowding, last month the town zoning board limited the number of new buildings that can be constructed in the town in any given year. The board claims that doing so will preserve open spaces and lessen the strain on municipal resources such as schools and garbage disposal. Critics of the changes argue that the plan will harm the community or, at the very least, will fail in its purpose. **Which of the following most supports the claims of the critics of the plan?**
- Other towns have had mixed success with similar zoning plans.
  - No new schools have been built in the town in ten years.
  - Property taxes in the town are higher than in neighboring towns.
  - Under the new plan, developers may still erect apartment buildings.
  - The nearest garbage dump is several miles away from the town.
22. At any given time, approximately fifteen percent of all homes in Florida are on the market. In Texas, however, only seven percent of all homes are on the market at any given time. Therefore, one will have a wider selection of homes to choose from if one looks for a home in Florida rather than in Texas. **Which of the following, if true, would most seriously strengthen the argument above?**
- Homes in Florida tend to be less expensive than those in Texas.
  - Mortgages are easier to obtain for homes in Florida than for homes in Texas.
  - The construction industry in Texas has reported significant growth over the past year.
  - The cost of constructing new homes in Texas is higher than in Florida.
  - The total number of homes in Florida is three times greater than the total number in Texas.

### Critical Reasoning Topic 5: Evaluate

1. A certain pharmaceutical firm claims that its dietary supplement, Dietol, is highly effective in helping obese people lose weight and improve physical endurance. The company supports this claim by providing the results of a recent experiment that involved over 800 subjects suffering from obesity. During the 9-week experiment, each of the subjects was required to take a regular dose of Dietol every day immediately after their daily 2-hour workouts supervised by a professional fitness instructor. As a result of the experiment, the subjects lost an average of 12 pounds of weight per person, and over 95% of all participants demonstrated higher physical endurance. *The answer to which of the following questions would be most helpful in evaluating the conclusion of the pharmaceutical company?*
- What was the daily dose of Dietol that the subjects were required to take?
  - What was the maximum weight lost by any participant during the 9-week program?
  - What would be the average weight loss and the improvement in endurance in a group of subjects with similar characteristics involved in the same physical fitness program but not taking Dietol?
  - What was the average age among the subjects participating in the experiment?
  - Did the majority of subjects experience a significant improvement in physical strength?

2. The recording industry is fighting a losing battle: it simply does not have the resources to prosecute all of the individuals who illegally download music from the Internet. Because the number of individuals who will be charged with a crime is so limited, the actions of the recording industry will have a minimal impact on the number of people who illegally download music. *The answer to which of the following questions would best help evaluate the accuracy of the conclusion above?*
  - Will recording industry lawyers dedicate the majority of their time to prosecuting those who illegally download music?
  - Is a small minority of individuals responsible for the majority of illegal song downloads?
  - Do many individuals who illegally download songs share their music files with other Internet users?
  - Will new Internet security technology permit the recording industry to more quickly and easily identify individuals who illegally download music?
  - Will the threat of prosecution alter the behavior of those who illegally download music?
  
3. While political discourse and the media in the United States have focused on the rise of job outsourcing, few have mentioned the sharp fall of talent “insourcing,” or the drop in enrollment of foreign-born graduate students since 2001, and its dire results. The decrease in such insourcing will hurt America’s competitiveness in basic research and applied technology, with serious consequences for years to come. The de-internationalization of graduate programs across the country will also negatively affect the global outlook and experience of the American students remaining in those programs; they will not have the opportunity to learn about foreign cultures directly from members of those cultures. What distinguishes the decline of talent insourcing from the rise of job outsourcing is that the former can be easily rectified by a policy change of the United States government. *The answer to which of the following questions would be most useful in evaluating the author’s claim regarding the impact of decreased insourcing in America?*
  - What is the cost to reverse the trend of insourcing in America?
  - How does insourcing replace domestic jobs lost from outsourcing?
  - Since 2001, what has been the decrease in the number of foreign-born students in America?
  - What opportunities do American graduate students have to interact regularly with foreigners who are not students?
  - What effect would a government policy have on the number of foreign graduate students?
  
4. Profits for one of Company X’s flagship products have been declining slowly for several years. The CFO investigated and determined that inflation has raised the cost of producing the product but consumers who were surveyed reported that they weren’t willing to pay more than the current price. As a result, the CFO recommended that the company stop producing this product because the CEO only wants products whose profit margins are increasing. *The answer to which of the following questions would be most useful in evaluating whether the CFO’s decision to divest the company of its flagship product is warranted?*
  - Does the company have new and profitable products available with which to replace the flagship product?
  - Will the rest of Company X’s management team agree with the CFO’s recommendation?
  - Are there additional features which could be added to the product and for which consumers might be willing to pay a higher price?
  - Is there a way to alter the manufacturing or distribution processes in order to reduce the cost to produce the flagship product?
  - What percentage of Company X’s revenues is represented by sales of the flagship product in question?
  
5. The Civil Service Act of 1883, also known as the Pendleton Act, which created a professional corps of administrators, was passed after a disappointed office-seeker assassinated President James A. Garfield. For a hundred years, this system has anchored American government service to competence rather than corruption. The best way to preserve this state in the new millennium is to maintain the Pendleton Act as it is. *Which of the following would be most useful to evaluate the argument’s conclusion?*
  - The methods that the Swiss and British governments have used to prevent corruption in government service for the past one hundred years
  - The current level of job satisfaction among government office-seekers and office-holders
  - The levels of competence and corruption in American government service between 1950 and the present
  - The number of Presidents assassinated since the passage of the Pendleton Act
  - The percentage of office-holders fired or convicted on charges stemming from corruption during the first hundred years of the Pendleton Act



6. Zoologists warn of an imminent surge in the number of bird species that will become extinct within this century. Nevertheless, these zoologists are wrong. One need only consider the information gathered on native North American raptors, such as bald eagles and peregrine falcons. Several of these species came close to vanishing between 1900 and 1970, but since 1970, the local populations of these raptors have rebounded. *The answer to which of the following questions provides information that would be most helpful in evaluating the argument above?*
- How many species of non-native raptors have been introduced into North America since 1970?
  - What special efforts, if any, have been made to rescue native North American raptors since 1970?
  - How many years' experience do the zoologists have in evaluating patterns of extinction among animals?
  - To what degree have native North American raptors migrated to other parts of the world?
  - How many acres of woodland are set aside each year as bird refuges?
7. Most cable television companies currently require customers to subscribe to packages of channels, but consumer groups have recently proposed legislation that would force the companies to offer a la carte pricing. Subscribers would pay less, argue the consumer groups, because they could purchase only the desired channels. However, the cable industry argues that under the current package pricing, popular channels subsidize less-popular ones, providing more options for viewers. For this reason, the industry claims that it is always cheaper for the consumer to purchase many bundled channels than to buy them individually. *Which of the following would be most important for the government to determine before deciding whether to require cable television companies to offer a la carte pricing in order to reduce consumer costs?*
- Whether the total number of channels offered to consumers would decrease, along with programming diversity, as a result of the a la carte pricing structure
  - Whether advertising revenue for the cable television companies would decrease as a result of the a la carte pricing structure
  - Whether the vast majority of consumers would greatly reduce the number of channels purchased if given the option of purchasing them individually
  - Whether cable and satellite companies currently have the ability to buy channels individually from programmers and content providers
  - Whether a la carte subscribers would be required to have new television set-top boxes
8. The director of programming at NNN, the National News Network, proclaimed that, despite charges to the contrary, the Network does not have a conservative bias. The director acknowledged that, when a liberal news personality was recently added to the Network, an additional conservative news program was also established. However, the director argued that far from demonstrating any bias, these actions reflect a commitment to presenting a balanced perspective in interpreting current events. *Which of the following pieces of information would be most useful in evaluating the validity of the programming director's argument?*
- The Network has established an additional liberal news program whenever an additional conservative news personality has been added.
  - The Network airs a program focused largely on the opinions of its viewers on contemporary issues.
  - The newly added liberal news personality came from a rival network with an acknowledged liberal bias.
  - The newly added liberal news personality has indicated that he has not felt any editorial pressure in his new environment.
  - The viewer ratings of the Network have been lower this past year than in previous years.
9. Child development specialists have observed that adolescents who receive large weekly allowances tend to spend money on items considered frivolous by their parents whereas adolescents who receive small weekly allowances do not. Thus, in order to ensure that their children do not spend money on frivolous items, parents should not give their children large weekly allowances. *Which of the following pieces of information would be most useful in evaluating the validity of the conclusion above?*
- The average amount of money received by adolescents who receive large weekly allowances
  - Any differences among parents in the standard used to judge an item as frivolous
  - The educational background of the child development specialists who made this observation
  - The difference between the average annual income of families in which the parents give their children large weekly allowances and that of families in which the parents give their children small weekly allowances
  - The percentage of adolescents who receive no weekly allowance

10. The downturn in the economy last year has prompted many companies to make widely publicized layoffs, resulting in thousands of lost jobs. Economists predicted that these layoffs would cause people generally to cut back on their discretionary spending even if their jobs were secure, in anticipation of coming hard times. However, this prediction has not come to pass, since there has been no increase in the amount of money set aside by the general public in savings accounts. *The answer to which of the following questions would be most useful in evaluating the significance of the savings patterns described above?*
- What business sectors were most affected by the layoffs?
  - How much of their savings, on average, do laid-off employees deplete before finding new employment?
  - What has been the percent increase in the cost of necessities such as food, housing, and utilities during the period since the layoffs?
  - What percentage of people laid off have savings accounts?
  - What has been the average salary during the period since the layoffs?
11. Because of a rare type of fungus that killed off many cacao trees in Brazil, there was an unusually meager harvest of cocoa beans this year. The wholesale price of cocoa solids and cocoa butter has increased significantly and does not look likely to fall in the foreseeable future. As a result, the retail price of chocolate is certain to increase within six months. *The answer to which of the following questions would provide information relevant to evaluating the claims made in the argument above?*
- Has the price of cocoa remained steady during other period of poor harvest?
  - Are consumers willing to spend more for chocolate?
  - Have the prices of other ingredients in chocolate decreased recently?
  - What percentage of cacao trees in Brazil were affected by the fungus?
  - Can the fungus be eliminated within the next six months?
12. Scientists have determined that an effective way to lower cholesterol is to eat three servings of whole grains every day. Studies have shown that the cholesterol levels of people who did so were significantly lower after six months than were those of people who did not, even though the cholesterol levels of the two groups were the same before the studies began. Clearly, eating whole grains can have an appreciable effect on cholesterol levels. *The answer to which of the following questions, if true, would be most useful in evaluating the claim about whole grains above?*
- Is it realistic to expect people to eat three servings of whole grains per day?
  - Were the two groups of people in the study involved in the same exercise program?
  - Can the same drop in cholesterol be achieved through medication?
  - Did the study continue to track the subjects beyond six months?
  - Are most consumers aware of the difference between whole grains and processed grains?

### Critical Reasoning Topic 6: Paradox

1. Greek tragedy, one of the enduring pillars of our belief system, dramatized the concept that the misfortune a person suffers is not an accident, but rather a logical outcome of flaws in that person's nature; the misfortune is thus that person's "fault." Nonetheless, today the public broadly supports bankruptcy protection, family welfare and other "social safety net" programs that shield the destitute in the face of their hardships, at taxpayer expense. *Which of the following, if true, would best resolve the paradox in the statements above?*
- The ancient Greeks had few, if any, such social safety net programs in their society.
  - The majority of the public is more familiar with the works of Shakespeare than those of Greek tragedy.
  - Some people insist that society, not the individual, is to blame for most accidents.
  - Many people in financial difficulties feel too ashamed to declare bankruptcy or to take advantage of other social safety net programs.
  - The religions practiced by most people today strongly encourage people to contribute to charities that assist innocent people injured in natural disasters, such as hurricanes.

2. A certain pharmaceutical firm recently developed a new medicine, Dendadrine, that provides highly effective treatment of severe stomach disorders that were previously thought to be incurable. However, to develop the new medicine, the company spent nearly \$5 billion in research and development costs. Given the size of the market for Dendadrine and the amount of the initial investment in its development, the company would need to sell Dendadrine at a price that is at least 5 times greater than its variable costs just to break even. Yet the company's management claims that Dendadrine will soon become the major driver of the firm's profits. *Which of the following statements best reconciles the management's claim with the evidence on the expenditures associated with the development of Dendadrine?*
- The pharmaceutical firm has been granted a patent to become the sole producer and distributor of Dendadrine, and drugs under patent protection typically sell at prices that are at least 10 times greater than their variable costs.
  - Development of some pharmaceutical products involves substantial initial expenditures on research, testing, and approval.
  - In issues related to personal health, corporate profits should not become the primary consideration.
  - Several other pharmaceutical companies are working on new medicines that may become effective substitutes for Dendadrine.
  - While Dendadrine can be highly effective in treating stomach disorders, it may also result in serious side effects such as dizziness and hallucinations.
3. Small community hospitals in poor urban areas almost always operate at a loss due to an unfortunate cycle of factors. High revenue specialists, such as surgeons, flock to hospitals that are more prestigious and can afford to pay higher salaries. Aware of this, local residents patronize the more affluent nearby hospitals when they need specialty care or forgo care entirely, while only utilizing the local hospital for low-margin routine care. Further, a significant majority of the community uses government health plans, which reimburse poorly for routine care, or lacks insurance entirely and cannot pay. The local hospital then loses money and cannot afford to hire specialists to conduct the higher-margin specialty care. *Which of the following, if it could be accomplished, would best help small community hospitals to break the pattern described above?*
- Negotiate higher reimbursement rates for specialty care with both government health plans and private insurers.
  - Advertise the hospital's specialty care services in the local community as well as nearby communities to attract more business.
  - Partner with a nearby affluent hospital to contract its specialists on a part-time, as-needed basis, which is more affordable than hiring these specialists full time.
  - Launch a community outreach campaign to educate the public about the low reimbursement rates of government health plans compared with the high rates paid by private insurers.
  - Negotiate with private insurers for higher reimbursement rates for routine care.
4. The climbing season of 2006 was the deadliest on record for those attempting to conquer Mount Everest, the world's tallest mountain, as more people perished attempting to reach the summit in 2006 than in any other year. Interestingly, most mountaineering experts attribute the high number of fatalities, almost all of which occurred in the unforgiving "death-zone" above 26,000 feet, directly to the exceptionally good weather prevalent during the 2006 climbing season. *Which of the following, if true, best helps to explain the conclusion of the mountaineering experts?*
- All of the forecasts were for extremely bad weather; the good weather was a significant surprise to all of the climbers.
  - The good weather prompted significantly more people than ever to try to reach the summit and enter the "death-zone," many of whom would have turned back at a lower altitude in poorer weather.
  - The good weather caused the "death-zone" to have warmer temperatures and less intense winds than in recent years.
  - Modern equipment is particularly effective in protecting climbers from the elements in bad weather.
  - Many accomplished climbers don't attempt Mt. Everest during good weather because they feel it is not a challenge.

5. The exchange rate between the currency of Country X and that of Country Y has historically favored the currency of Country Y. Because of this, citizens of Country Y often take their vacations in Country X, where the exchange rate makes hotels and restaurants more affordable. Yet, citizens of Country Y rarely purchase clothing or electronics in Country X, despite the fact that those items are more expensive in their home country, even when sales taxes are taken into account. *Which of the following, if true, would best explain the buying habits of the citizens of Country Y?*
- Citizens of Country Y prefer the fashions available in their own country.
  - Stores in Country X receive the latest fashions and technology several months after they are available in Country Y.
  - The citizens of Country X resent the buying power of the currency of Country Y.
  - The government of Country Y imposes tariffs on imported goods.
  - The currencies of Country X and Country Y are both weak compared to the currency of Country Z.
6. When Bob's Bistro opened in the town of Montrose last year, the proprietors of Andrew's Eatery, the only other restaurant in town, feared that their business would suffer. Surprisingly though, in the past year the average number of meals per day served at Andrew's Eatery has actually increased significantly. *Which of the following, if true, provides the best explanation for this occurrence?*
- The meals at Andrew's Eatery are substantially lower in price than those offered at Bob's Bistro.
  - Bob's Bistro is closed on Sundays, and so for Sunday brunch residents of Montrose would either go to Andrew's Eatery or venture to a neighboring town.
  - The profit per meal is higher, on average, at Bob's Bistro than it is at Andrew's Eatery.
  - Bob's Bistro attracts a large number of patrons that had never dined in Montrose before, and on many days Bob's Bistro attracts more customers than it can seat.
  - Andrew's Eatery serves considerably more meals on weekends than it does on weekdays, which is not the case at Bob's Bistro.
7. On average, residents of City X devote a greater percentage of their yearly incomes to housing costs than do residents of City Y, though the costs of insurance and fuel generally are exorbitant in both commuter-heavy cities. Yet in Wealth Magazine's annual list of the country's least affordable cities, City Y is deemed less affordable than City X. *Which of the following, if true, best explains the contrast described above?*
- A greater percentage of residents of City Y send their children to private schools than is the case in City X.
  - Unlike City Y, City X has an efficient and inexpensive public transportation system.
  - The average price of a new house is higher in City X than in City Y.
  - A number of high-priced restaurants and boutiques have recently opened in City Y.
  - Several large businesses have recently relocated from City Y to City X.
8. Certain oil companies have been called poor corporate citizens because they have opposed government action to limit global warming by undermining scientific research that characterizes the issue as severe. However, these same oil companies have also invested millions of dollars in scientific research to address the long term effects of climate change. *Which of the following best explains the apparent discrepancy in the situation described above?*
- The oil companies only recently began investing in scientific research to address climate change issues.
  - The research dollars invested by the oil companies are specifically earmarked for developing practical technologies that might be used to combat global warming.
  - The government action opposed by the oil companies would negatively impact their profits.
  - The scientific research that characterizes global warming as a severe problem has not been definitively proven.
  - The oil companies don't believe that any scientific research related to climate change will ultimately serve their interests.
9. Country X contains many rivers that flow down from its high mountains. These rivers have been dammed to harness the hydroelectric power that can be derived from this resource. More than enough power is generated from these dams to meet the country's energy needs. Yet, citizens of Country X often experience power shortages or even outages. *Which of the following, if true, best explains the situation described above?*
- The flow of the rivers is heavier in the spring than at other times of year.
  - Citizens of Country X rely heavily on electronic appliances in their homes.
  - Country X has not invested in alternate sources of energy.
  - Most of the electricity generated in Country X is sold to other countries.
  - Some of the most powerful rivers in Country X have yet to be dammed.

10. As a result of consumers' increased awareness of the health risks associated with heavy consumption of red meat, the meat of the ostrich has become increasingly popular as a low-fat, low-cholesterol alternative to beef. Accordingly, the number of ostrich farms in the United States has nearly quadrupled since 1980, flooding markets with ostrich products. However, the price-per-pound of ostrich meat, adjusted for inflation, has not decreased at all over the past several years. *Which of the following, if true, would best explain the steady price-per-pound of ostrich meat?*
- The demand for ostrich products has outpaced the supply.
  - Ostriches are especially difficult to breed in captivity.
  - Other types of meat, such as pork and poultry, have decreased in price over the past several years.
  - Purveyors of beef have not attempted to counter beef's poor public image.
  - The number of supermarkets that carry ostrich meat has increased steadily since 1980.
11. Life in an urban center, with daily experiences of subways, crowded sidewalks and dense living, provides countless opportunities for social contact and connection. Exurban life, by contrast, exists in the openness of freeways and one-acre lots, exhibiting little that would suggest social commonality. Yet studies show that people who live in exurbia consistently rate their feeling of connectedness to their community as strong whereas urban dwellers more frequently express feelings of isolation. *Which of the following, if true, contributes most to an explanation of the difference in the reported feelings of connectedness between urban and exurban dwellers?*
- The cost of living in exurbia is significantly lower than that in urban areas.
  - Rates of attendance at houses of worship are much higher in exurban areas than in urban ones.
  - Exurban school districts often spend more per capita on their students than do those in urban areas.
  - The rate of violent crime is much lower in exurban areas than in urban ones.
  - Many people who live in exurbia moved there from urban areas.
12. When Americans filed their tax returns this year, the United States Treasury Department collected \$315.1 billion in tax revenue, a 13.4% increase over last year. Yet the number of tax returns filed by employees did not increase significantly over the past year. *Each of the following, if true, could explain the simultaneous increase in tax revenue collection and the unchanged number of employee tax returns filed EXCEPT:*
- During this year, the number of women who re-entered the workforce as employees, after taking time off to raise children, was greater than the number of people who retired from the workforce.
  - Many retired workers owed more in taxes this year due to an increase in dividends and capital gains on their stock investments.
  - Last year, tax revenues were unusually low because the stock market experienced a marked decline, and many taxpayers reduced their taxable income with capital losses.
  - Compared with previous years, a greater percentage of the total tax revenue this year was collected from small businesses and corporations.
  - The employees who filed tax returns were paid higher wages this year than they were in the past, and thus owed more to the government in taxes per person.
13. Amtown's public schools are supported primarily by town property taxes. The town plans to eliminate the property tax and support schools with a new four-percent sales tax on all retail items sold in town. Four percent of current retail sales is substantially less than the amount currently collected through property taxes, but town planners believe that adopting this plan will not have a negative impact on the funds available for the town's public schools because \_\_\_\_\_. *Which of the following most logically completes the argument?*
- a new shopping center that will draw shoppers from neighboring towns will open this year in Amtown
  - many Amtown residents are planning to leave town due to high property taxes
  - a number of parents who currently send their children to Amtown's public schools do not pay property taxes.
  - the sales tax in neighboring towns is much higher than four percent
  - Amtown was recently featured in a magazine as one of the top 10 weekend getaways from a nearby city.

14. In recent years, the Holdsville Transportation Authority (HTA) has noted consistent delays on its Holdsville-River Valley bus, which runs from downtown Holdsville to the suburb of River Valley. In order to decrease the commuting time from Holdsville to River Valley, the HTA recently eliminated the James Street stop on the Holdsville-River Valley line. However, data show that the average commuting time from Holdsville to River Valley has actually increased since the elimination of the stop. *Which of the following provides the best explanation for the increase in commuting time from Holdsville to River Valley?*
- Almost all of the commuters who previously used the James Street stop now use the adjacent Green Street stop, causing overcrowding and excessive boarding and de-boarding delays at the Green Street stop.
  - A small percentage of the commuters who previously used the James Street stop now use alternate modes of transportation to commute from Holdsville to River Valley.
  - 90% of Holdsville-River Valley commuters were in favor of eliminating the James Street stop.
  - The Holdsville-River Valley bus route runs along River Street, which is always congested with heavy automobile traffic.
  - The Johnstown bus line, another line operated by the HTA, has also experienced an increase in average commuting time since eliminating a stop on its route.
15. City Controller: 63% of our residents voted to approve the developer's request to build a national chain hotel on the site of the old consignment store. The hotel will increase our revenue base and, therefore, provide more money for schools and community services.  
Mayor: But our recent survey showed that the most important reason people want to live here is our small-town feel resulting from the local ownership of the vast majority of businesses.  
*What is the best explanation for the apparent contradiction in opinions cited by the controller and the mayor?*
- Most people believe having a small-town feel is more important than having quality schools.
  - A locally-owned business might be able to generate as much revenue as a well-known hotel chain.
  - The recent survey did not ask about preferences for a chain hotel versus a locally-owned bed and breakfast.
  - An increase in the town's revenue base may not result in additional money for the schools.
  - The recent survey cited by the mayor polled people who are considering moving to the town.
16. In 1963, Congress approved the Community Mental Health Centers Act, which outlined plans to release the mentally ill from institutions, incorporate these individuals into their communities, and provide outpatient treatment. Leading associations of mental health professionals overwhelmingly applauded these goals and approved of these plans because, the experts said, the treatment rather than the institutional environment was the crucial element for the welfare of these patients. Within twenty years, state authorities succeeded in discharging 95% of these patients from institutional care. In 1983, however, executives from these same professional associations said that the plight of the mentally ill was worse than ever. *Which if the following, if true, best resolves the paradox in the above passage?*
- More people were diagnosed with psychiatric disorders in 1983 than in 1963.
  - Many mental health professionals believe that if their peers had administered the project rather than the state authorities, the results would have been better.
  - The state budget allocation for services to the mentally ill has not increased faster than the rate of inflation.
  - Congress agreed to fund these outpatient services, provided that the money come from cuts in other domestic programs; these cuts, however, never materialized.
  - Many of the released patients had, at some time, been addicted to illegal narcotics.
17. Company X manufactures swim wear and planned to launch a new line of women's bathing suits in March, which is typically the peak time of year for swim wear sales. The company conducted consumer polls, which returned favorable results for both style and price, and took out advertisements in major fashion magazines and television stations. Yet the launch was disappointing: sales in March did not exceed even half of the company's sales during the same period in the previous year. *Each of the following, if true, could explain the disappointing sales of the new swim wear line EXCEPT:*
- None of the stores carrying the new swim wear line displayed it prominently.
  - The company's manufacturing plants experienced difficulty in obtaining dyes in the advertised colors and so substituted different colors.
  - A major competitor launched a line of similar swim wear at a lower price in February.
  - A scene in which a major actress was to wear one of the new swimsuits in a much anticipated movie to be released in February was never filmed.
  - The prediction of a cool, rainy summer by meteorologists received much attention in the national media.

### Critical Reasoning Topic 7: Boldface

1. Local authorities are considering an amendment to the litter law that would raise the fine for littering in the community picnic area to \$1,000. Since the inception of the litter law, **incremental increases in the littering fine have proven to be consistently effective at further reducing the amount of litter in the community picnic area.** However, raising the fine to \$1,000 would actually have the unintended effect of increasing the amount of litter in the picnic area. **Picnic area users would perceive this fine to be unreasonable and unenforceable, and would disregard the litter law altogether.** *In the argument, the two portions in boldface play which of the following roles?*
  - The first is irrefutable evidence that the author offers in support of a prediction; the second is that prediction.
  - The first is a statement of causation that the author predicts will be repeated in the case at hand; the second raises evidence against this prediction.
  - The first is a statement of fact that the author accepts to be true; the second is presented as a consequence of this fact.
  - The first is evidence that weakens the main position that the author defends; the second is that position.
  - The first is a statement of causation that the author predicts will not hold in the case at hand; the second offers a line of reasoning to support this prediction.
2. Political analyst: A party that temporarily positions itself in the negligible crack between the American right and left will do little to expand the public debate. What America needs is a permanent third party. **Some claim that America's success stems from the two party system.** These people say that a third party would make the passage of legislation and thus governance impossible. Furthermore, they point to the current sluggish pace of government as proof that the country cannot bear the burden of a third party. **Yet, most European countries have multi-party systems and few complain about any inability to govern there.** *Which of the following best describes the functions of the two sections in boldface in the argument above?*
  - The first is the main point of the argument; the second is a premise that supports that point.
  - The first opposes the premises of the argument; the second is the claim that the argument supports.
  - The first supports the main position held by opponents of the main point; the second is a premise that argues against that position.
  - The first is the primary claim made by opponents of the main point of the argument; the second is evidence proposed in opposition to the first.
  - The first is a claim made by opponents of the main point of the argument; the second is the claim that the first opposes.
3. Letter to the editor: Proposition Q, a controversial measure on this year's ballot, would prohibit the ownership of handguns within the city's limits. Under the plan, gun owners would have a 90-day grace period to turn in their weapons to authorities. Proponents of the proposition argue that **fewer handguns on the streets would lead to less violent crime, making the city safer for all of its citizens.** Unfortunately, the ban would actually have the opposite effect. Since only law abiding citizens would honor the ban, **armed criminals would not only keep their weapons but would also have the confidence to act with impunity on a population that could no longer defend itself.** *In the letter to the editor, the two portions in boldface play which of the following roles?*
  - The first is an observation that the author uses to support a particular position; the second is that position.
  - The first is a pattern of cause and effect that the author believes to be true; the second offers evidence to contradict this pattern.
  - The first is a position that the author argues will not hold in this case; the second is the author's position.
  - The first is a prediction that the author believes to be untrue. The second is a statement of fact that undermines the author's position.
  - The first is a direct relationship that the author believes will not hold in this case; the second offers evidence in support of the author's position.

4. Scientist: Evolutionary biology has long held that the most attractive males of a species, defined as those with the highest quality physical traits that have no Darwinian survival value, will draw the most female mates. **The resulting male offspring will inherit that attractiveness and themselves have more children as a result**, thus ensuring widespread dissemination of the grandparents' genes. Recently, however, scientists have found that the sons of "high quality" male flycatchers failed to inherit the father's mating status. Further, the most attractive males were so busy mating that they neglected their offspring; **as a result, the sons of homelier birds, who took better care of their offspring, had more success at propagating the species**. *The two portions in boldface play which of the following roles in the scientist's argument?*
- The first is the conclusion of a theory disputed by the scientist; the second is the scientist's new contention based upon the latest evidence.
  - The first is a premise of a long-held biological theory; the second is an example of how this theory works.
  - The first is an explanation of how a biological theory is thought to work; the second is an example of research results that do not support this theory.
  - The first is an example of a theory that used to be prevalent; the second is the new theory that is now considered predominant by scientists.
  - The first introduces a long-held theory that the scientist is going to disprove; the second is the scientist's new theory to replace the one she disproved.
5. Traditionally, video game manufacturers have been most strongly influenced by serious video gamers. Because devoted gamers have historically purchased the majority of video games, companies react to the desires of this market segment. Normally, devoted gamers crave speed and action; **thus, most manufacturers continue to produce games with faster chips and flashier graphics**. Unfortunately, faster chips and flashier graphics are no longer in the industry's best interest. **The devoted gaming market is deeply stagnant, and it won't soon expand**. To infuse new life into the video game market, manufacturers must simplify the functionality of their games. By doing so, current non-gamers will be attracted to join the ranks of video game fans. *In the argument, the two portions in boldface play which of the following roles?*
- The first is a situation that the author believes to be true; the second offers evidence to explain this situation.
  - The first is a situation that the author argues should not continue; the second provides evidence that supports the author's position.
  - The first is a statement of fact that contradicts the author's position; the second is the author's position.
  - The first is a statement of fact that supports the author's position; the second is a consideration that weighs against the author's position.
  - The first is a prediction that the author believes should not hold in this case; the second is an assumption that weighs against the author's position.
6. Musical composers have generally made their most significant contributions to the musical canon before they reached the age of thirty. It is commonly believed that this is the case because **aging brings about a loss of cognitive ability and creative capacity**. However, a study pointed out that **a disproportionately large number of those composers who made their most significant contributions to the canon after the age of thirty became musicians at an older age than is generally the case**. Since by the age of thirty many composers have been engaged as musicians for a decade or more, these findings suggest that the real reason why musicians over thirty rarely make significant contributions to the musical canon is not that they have aged but rather that they have spent too much time as musicians. *In the argument above, the two portions in boldface play which of the following roles?*
- The first is an explanation that is challenged by the argument; the second is a finding used to support that explanation.
  - The first is an explanation that the argument opposes; the second is an objection raised against the alternative explanation advocated by the argument.
  - The first is a claim advanced in support of a position; the second is a finding that clarifies that position.
  - The first is an explanation advocated by the argument; the second is a finding used to challenge that explanation.
  - The first is an explanation that the argument challenges; the second is a finding on which that challenge is based.



7. The city government should invest surplus funds in improving the city's transportation network. **Most of the network was put in place at a time when the city was much smaller in both area and population.** The subway system is outdated and understaffed. The buses rarely run on schedule and their routes are inconvenient. **If the city does not make changes soon to the network, it will see many of its prized industries relocate to more convenient cities and, as a result, the city's financial health will be jeopardized.** *In the argument above, the two portions in **boldface** play which of the following roles?*
- The first is an explanation of a current state of affairs; the second is a prediction based on that state of affairs.
  - The first is a statement of fact in opposition to the author's conclusion; the second is that conclusion.
  - The first emphasizes an existing problem; the second offers a proposal to solve that problem.
  - The first is information the author suggests has been overlooked in the situation at hand; the second describes that situation.
  - The first is a justification of an impending problem; the second describes the consequences of that problem.
8. Chief Economist: Usually, **the release of economic data about higher-than-expected growth in the Gross Domestic Product (GDP) results in an increase in stock prices.** However, this quarter, the release of data about strong GDP growth is most likely to result in a decrease rather than an increase in stock prices. **Robust GDP growth will lead to higher interest rates, increasing the attractiveness of bonds and causing a shift of capital from equity to debt securities.** *In the above argument, the statements in **boldface** play which of the following roles?*
- The first acknowledges a consideration against the main conclusion of the chief economist; the second is that conclusion.
  - The first is a pattern of cause and effect that the chief economist predicts will not hold in the case at issue; the second offers a consideration in support of that prediction.
  - The first is a generalization that the chief economist accepts as true; the second is a consequence that follows from that generalization.
  - The first is evidence that the chief economist provides in support of a certain prediction; the second is that prediction.
  - The first is a pattern of cause and effect that the chief economist predicts will be repeated in the case at issue; the second acknowledges a circumstance in which that pattern would not hold.
9. Political Analyst: After the Soviet Union collapsed, some hoped that freedom would encourage Russians to multiply, but as a result of dislocation and insecurity, the Russian population continues to dwindle at the rate of 700,000 a year. The government proposes to address the problem with a wide range of financial incentives, along with investments in improved health care, road safety and the like. These are positive measures, but **they have been tried before, to little avail.** A better plan to reverse the population decline is to improve the country's governance in both the public and the private sphere. **If a greater part of the population participated in important decisions and shared in the country's wealth, then larger families would result.** In addition, if corruption and greed among the elite were curbed, public health would improve and average life expectancy would increase. *The two boldfaced statements serve what function in the argument above?*
- The first is the main point of the analyst's argument; the second is a premise that supports the first.
  - The first is a premise that undermines an alternative to the analyst's proposal; the second is a premise that supports the analyst's main claim.
  - The first is a premise that contradicts the main point made by the analyst; the second is the main point of the argument.
  - The first is a premise that supports a proposal; the second is that proposal.
  - The first is a conclusion that the argument endorses; the second is a premise that opposes that conclusion.
10. United Energy recently invested in a series of large windmills which are able to produce renewable energy with minimal negative effect to the environment. The company has not drilled oil wells in the same area, even though **greater revenues and profits could be generated from oil wells.** Because any drilling would disrupt the native habitat of certain marine species in the area, some environmentalists assert that, by foregoing this drilling, **United Energy has established that it places environmental impact over financial returns.** However, United Energy may be acting in a manner consistent with its financial goals. Recent patterns of increasing annual hurricane activity have some experts questioning the long-term viability and profitability of oil wells in the area. *The two boldfaced portions play which of the following roles?*
- The first supports the conclusion of the argument; the second calls that conclusion into question.
  - The first states the conclusion of the argument; the second supports that conclusion.
  - The first supports the environmentalists' conclusion; the second states that conclusion.
  - The first states the environmentalists' conclusion; the second provides a consideration in support of that conclusion.
  - The first supports the conclusion of the argument; the second also supports the conclusion of the argument.

11. Marketing Analyst: Traditionally, **introducing a new consumer product contributes to the diversity of a company's product mix and results in an overall increase in revenues and profits.** However, our launch of a new brand of soft drinks, Cool Breeze, planned for the end of this fiscal year, will almost certainly reduce rather than increase the company's profits. Since we already offer a line of chilled refreshments that are very similar to Cool Breeze, the launch of the new drink is likely to cannibalize our current sales rather than attract new customers. Additionally, **since the costs of producing Cool Breeze are higher than those of the other chilled refreshments, a large part of our current sales will be replaced with lower-margin revenues.** *In the argument above, which of the following statements best describes the role played by each portion in boldface?*
- The first is a pattern of cause and effect that the marketing analyst predicts will be repeated in the case at issue; the second acknowledges a circumstance in which that pattern would not hold.
  - The first is a generalization that the marketing analyst accepts as true; the second is a consequence that follows from that generalization.
  - The first acknowledges a consideration against the main conclusion of the marketing analyst; the second is that conclusion.
  - The first is a pattern of cause and effect that the marketing analyst predicts will not hold in the case at issue; the second offers a consideration in support of that prediction.
  - The first is evidence that the marketing analyst provides in support of a certain prediction; the second is that prediction.
12. Letter writer: Illegal drug use is often associated with other serious problems, such as armed robbery and other violent crimes. Statistics indicate that **each time police increase their enforcement of anti-drug laws in the city, the number of violent crimes committed in the city declines as a result.** However, eliminating criminal penalties for drug use would almost certainly decrease rather than increase the incidence of armed robbery and other violent crime. **If drugs were no longer illegal, the price would drop precipitously, and drug users would no longer need to commit crimes to acquire the money necessary to support their drug habits.** *In the letter writer's argument, the two portions in boldface play which of the following roles?*
- The first is support offered by the letter writer for a certain forecast; the second is that forecast.
  - The first acknowledges an observation that refutes the main position that the letter writer takes; the second is that position.
  - The first is a direct relationship between two activities that the letter writer argues is an infallible predictor of future events; the second acknowledges a circumstance in which that relationship would not apply.
  - The first is a direct relationship between two activities that the letter writer predicts will not hold in the future; the second offers information that, if true, would support that prediction.
  - The first is a statement that the letter writer believes is true; the second is presented as a logical inference drawn from the truth of that statement.
13. Real Estate Agent: Next year, **the occupancy rate for residential rental properties in Riverton will increase despite projections of decreasing population in the city.** Generally, when a city's population decreases, so does the occupancy rate for residential rental properties. However, **in the continuing climate of increasing interest rates on home mortgages, an unusually large number of Riverton residents who would typically buy homes will opt to rent instead.** *The boldfaced statements in the argument above play which of the following roles?*
- The first is a conclusion drawn by the agent; the second is evidence that weighs against the agent's conclusion.
  - The first is a consideration that weighs against the agent's prediction; the second is that prediction.
  - The first describes a pattern of cause and effect; the second describes a situation for which this pattern will not hold.
  - The first is the agent's prediction; the second is reasoning offered in support of this prediction.
  - The first is an undisputed statement of fact; the second is a position that is supported by this fact.

14. **Policy analyst: Most government agencies become less effective over time.** Some experts go so far as to recommend that every agency be eliminated after 10 years and created anew by replacing all of its existing personnel and revamping its bureaucratic structure. However, this policy would be impractical since **certain government agencies perform vital functions, such as protecting national security, and therefore cannot afford even temporary upheaval.** *In the policy analyst's argument above, the two portions in boldface play which of the following roles?*
- The first is evidence offered in support of an opinion that the policy analyst rejects; the second offers information that contradicts that evidence.
  - The first is a premise that the policy analyst accepts but argues against; the second offers evidence that supports the analyst's position.
  - The first is a position that the policy analyst argues against; the second is the position that the analyst defends.
  - The first is a generalization that the policy analyst accepts as accurate and is used as the basis for an opinion that the analyst rejects; the second is a consideration used to defend the analyst's position.
  - The first is a generalization that the policy analyst accepts as accurate and is used as the basis for the analyst's position; the second offers another consideration used to defend that position.
15. **Political Candidate: Government subsidized prescription drug plans that would allow individuals significant choice in determining their benefits and costs are deceptively appealing to numerous stakeholders.** However, buying prescription drug coverage, like buying health insurance coverage, is not like buying a car. **The consumer cannot predict his or her future health needs.** Moreover, the administrators of the choice-based drug plans under consideration are allowed to change the drugs they cover and the prices they charge at any time; this renders informed consumer choice meaningless and makes securing appropriate coverage a crap shoot. Older and disabled individuals, the predominant consumers of government subsidized prescription drug plans, should be offered drug coverage alternatives that do not force them to gamble with their health. *In the argument above, the two portions in boldface play which of the following roles?*
- The first is a fact that the candidate argues against; the second is the ultimate claim that the candidate supports.
  - The first is an observation which the candidate acknowledges as true but to which he is ultimately opposed; the second is a claim that the candidate uses as evidence to support his ultimate position.
  - The first is an observation that the candidate acknowledges as true but unfortunate; the second is an assertion that the candidate makes to support his ultimate position.
  - The first is an observation that the candidate argues against; the second is an observation that the candidate supports.
  - The first is an observation made by the candidate; the second is an assertion that the candidate ultimately opposes.
16. Studies have shown that **people who keep daily diet records are far more successful at losing weight than people who don't keep track of what they eat.** Researchers believe that many weight-loss efforts fail because people eat more calories than they intend to consume. One study followed a group of patients who reported that they could not lose weight when consuming only 1,200 calories a day. **The study found that the group consumed, on average, 47% more than it claimed and exercised 51% less.** In contrast, when dieters record what they eat, their actual consumption more closely matches their reported consumption. *The two boldface portions in the argument above are best described by which of the following statements?*
- The first is a conclusion reached by researchers; the second is evidence that that conclusion is correct.
  - The first is an explanation of why a certain theory is thought to be true; the second is an example of research results that support this theory.
  - The first is an example illustrating the truth of a certain theory; the second is a competing theory.
  - The first is a premise upon which the researchers base their opinion; the second illustrates that their opinion is correct.
  - The first introduces a theory that the researchers have disproved; the second is the basis for the researchers' argument.
17. **Weight loss programs that guarantee results mislead their customers.** No program can ensure that someone who follows it will lose weight. These programs prey upon unhappy and insecure people who are often driven more by emotion than by reason. **Moreover, many people who lose weight while on a program eventually regain the weight within a year.** So while the programs' claims may be true for a short period, customers will be disappointed in the long run. *The two portions in boldface play which of the following roles?*
- The first is a generalization; the second is a consequence of that generalization.
  - The first is the author's position; the second is a consideration in support of that position.
  - The first is an opinion under examination; the second is evidence weighing against that opinion.
  - The first is an assertion that the author questions; the second is evidence in support of that assertion.
  - The first is evidence in support of the author's main point; the second is the author's main point.

18. For nearly a century, physiologists erroneously believed that **a buildup of lactic acid in muscle tissue was responsible for the soreness that many people experience after strenuous exercise**. The acid, they claimed, is the waste produced by metabolic activity in the muscle and reaches "threshold" levels, causing soreness, when the muscle has depleted its oxygen supply. **Researchers have recently discovered, however, that lactic acid is actually the fuel that powers muscular activity**. Therefore, the cause of muscle soreness remains unknown. *In the argument above, the portions in boldface play which of the following roles?*
- The first is an assertion that the author accepts as true; the second is a consideration in support of that assertion.
  - The first is an assertion that the author accepts as true; the second describes a situation that the author posits as contrary to that assertion.
  - The first is an assertion that the author argues against; the second is evidence presented as contrary to the author's argument.
  - The first is evidence that the author believes is no longer valid; the second is additional evidence that the author uses to support his main point.
  - The first is a claim that the author believes to be invalid; the second is the author's main point.
19. **The president's nominees to federal circuit courts have been judged conservative for their stands on hot-button issues**. But a review of their financial disclosure forms and Senate questionnaires reveals that the nominees are more notable for their close ties to corporate and economic interests, especially the energy and mining industries. Some of them were paid lobbyists for those same interests. Further, **the nominees with industry ties were overwhelmingly appointed to circuit courts regarded as traditional battlegrounds over litigation affecting these industries**. Independent observers who follow the federal bench believe that the extensive corporate involvement among so many of the nominees is unprecedented. *In the argument above, the two portions in boldface play which of the following roles?*
- The first is a generalization that the author aims to attack; the second is that attack.
  - The first is a pattern that the author acknowledges as true; the second is the author's conclusion based on that acknowledgment.
  - The first is a phenomenon that the author accepts as true; the second is evidence in support of the author's conclusion.
  - The first is the author's position based on the evidence cited; the second is a pattern presented in support of that position.
  - The first is an exception to a rule introduced in the argument; the second provides the reasoning behind the exception.
20. **If interest rates remain at their current high levels, many people who currently rent their residences will hesitate to purchase homes**. As the price of real estate continues to climb, the costs of a mortgage will be too burdensome. Sellers will be forced to lower their asking prices. **So, high interest rates will eventually cause the real estate market to stabilize**. *In the argument above, the portions in boldface play which of the following roles?*
- The first is the author's main point; the second is a prediction that follows from that point.
  - The first is a consideration that the author believes will result in a certain situation; the second is that situation.
  - The first is a consideration that weighs against the author's main point; the second is the author's main point.
  - The first is a prediction; the second is evidence in support of that prediction.
  - The first is the author's main point; the second is evidence used to argue against that point.
21. Corporate Strategist: It is generally true that a reduction in the price of a good results in an increase in the demand for this product, leading to higher sales. However, I believe that **the management's strategy of stimulating the sales of our luxury cars by implementing a series of aggressive price reductions is seriously flawed**. Dramatic price reductions on our luxury cars will erode the image of exclusivity and premium quality associated with these vehicles. **If our cars become substantially cheaper, they will no longer represent the symbol of status and financial success, thus losing their main appeal to our customers**. *Which of the following statements best describes the role of each portion in boldface in the argument above?*
- The first represents the main position of the corporate strategist; the second acknowledges a consideration that weighs against that position.
  - The first is an assumption made by the corporate strategist about the efficacy of the management's strategy; the second is evidence that supports the strategist's reasoning.
  - The first is evidence supporting the main position of the corporate strategist; the second is that position.
  - The first is evidence supporting the position of the corporate strategist; the second is a generalization that will not hold in the case at issue.
  - The first is the main position of the corporate strategist; the second is evidence in support of that position.

22. **The fight against the drug trade in Country X should focus for the time being on tightening the country's borders and targeting its major smugglers.** Wiping out poppy fields in rural areas means even greater hardship for an economically depressed farming population. **Rather, the United Nations and the government of Country X must carefully rebuild agricultural infrastructure in areas where the economy depends on these poppy fields.** *What purpose do the two boldface sentences serve in the passage?*
- The first is the conclusion drawn by the speaker; the second is the alternative to that conclusion.
  - The first is a short-term solution to a problem; the second is a long-term solution to the same problem.
  - The first presents a problem; the second poses an ideal solution to the problem.
  - The first presents a popular solution to a problem; the second presents a solution preferred by the author.
  - The first presents an argument; the second presents evidence to support the argument.
23. Mayor: Some of my critics claim that the city's current budget deficit has been caused by my policies, and that I am responsible for the deficit. Although I admit that **the city has run a budget deficit during my tenure**, I do not agree that I am at fault for this problem. The economic policies of the prior administration caused the current deficit, and **were it not for the economic policies of my administration, the current deficit would be even worse.** In the mayor's argument, the two **boldface** portions play which of the following roles?
- The first is a premise that has been used against the mayor; the second supports the critics of the mayor.
  - The first is a statement accepted by the mayor; the second is a consequence of the critics' claims.
  - The first is a fact that the mayor believes does not contradict his conclusion; the second offers support in consideration of that conclusion.
  - The first is evidence of unlawful activity by the mayor; the second is evidence offered by the mayor to explain that activity.
  - The first is evidence that undermines the mayor's main position; the second is a statement that follows from that position.
24. **Environmental organizations want to preserve the land surrounding the Wilgrinn Wilderness Area from residential development.** They plan to do this by purchasing that land from the farmers who own it. That plan is ill-conceived: if the farmers did sell their land, they would sell it to the highest bidder, and developers would outbid any other bidders. On the other hand, **these farmers will never actually sell any of the land, provided that farming it remains viable.** But farming will not remain viable if the farms are left unmodernized, and most of the farmers lack the financial resources modernization requires. And that is exactly why a more sensible preservation strategy would be to assist the farmers to modernize their farms to the extent needed to maintain viability. In the argument as a whole, the two **boldface** proportions play which of the following roles?
- The first presents a goal that the argument rejects as ill-conceived; the second is evidence that is presented as grounds for that rejection.
  - The first presents a goal that the argument concludes cannot be attained; the second is a reason offered in support of that conclusion.
  - The first presents a goal that the argument concludes can be attained; the second is a judgment disputing that conclusion.
  - The first presents a goal, strategies for achieving which are being evaluated in the argument; the second is a judgment providing a basis for the argument's advocacy of a particular strategy.
  - The first presents a goal that the argument endorses; the second presents a situation that the argument contends must be changed if that goal is to be met in the foreseeable future.
25. **Economist:** Tropicorp, which constantly seeks profitable investment opportunities, has been buying and clearing sections of tropical forest for cattle ranching, although pastures newly created there become useless for grazing after just a few years. The company has not gone into rubber tapping, even though **greater profits can be made from rubber tapping**, which leaves the forest intact. Thus, some environmentalists conclude that **Tropicorp has not acted wholly out of economic self-interest.** However, these environmentalists are probably wrong. The initial investment required for a successful rubber-tapping operation is larger than that needed for a cattle ranch. Furthermore, there is a shortage of workers employable in rubber-tapping operations, and finally, taxes are higher on profits from rubber tapping than on profits from cattle ranching. In the economist's argument, the two **boldfaced** portions play which of the following roles?
- The first supports the conclusion of the economist's argument; the second calls that conclusion into question.
  - The first states the conclusion of the economist's argument; the second supports that conclusion.
  - The first supports the environmentalists' conclusion; the second states that conclusion.
  - The first states the environmentalists' conclusion; the second states the conclusion of the economist's argument.
  - Each supports the conclusion of the economist's argument.

26. It is well documented that people have positive responses to some words, such as "kind" and "wonderful" and negative responses to others, such as "evil" and "nausea." Recently, psychological experiments have revealed that **people also have positive or negative responses to many nonsense words**. This shows that people's responses to words are conditioned not only by what the words mean, but also by how they sound. The **boldface** portion plays which one of the following roles in the argument?
- It is a premise offered in support of the conclusion that people have either a positive or a negative response to any word.
  - It is a conclusion for which the only support provided is the claim that people's responses to words are conditioned both by what the words mean and by how they sound.
  - It is a generalization partially supported by the claim that meaningful words can trigger positive or negative responses in people.
  - It is a premise offered in support of the conclusion that people's responses to words are engendered not only by what the words mean, but also by how they sound.
  - It is a conclusion supported by the claim that people's responses under experimental conditions are essentially different from their responses in ordinary situations.
27. Psychologist: **The obligation to express gratitude cannot be fulfilled anonymously**. However much society may have changed over the centuries, human psychology is still driven primarily by personal interaction. Thus, the important social function of positively reinforcing those behaviors that have beneficial consequences for others can be served only if the benefactor knows the source of the gratitude. The **boldface** portion plays which one of the following roles in the argument?
- It is an illustration of a premise that is used to support the argument's conclusion.
  - It is used to counter a consideration that might be taken to undermine the argument's conclusion.
  - It is used to support indirectly a claim that the argument in turn uses to support directly the conclusion.
  - It is used to identify the social benefit with which the argument is concerned.
  - It is the conclusion that the argument is intended to support.
28. Seemingly inconsequential changes in sea temperature due to global warming eventually result in declines in fish and seabird populations. A rise of just two degrees prevents the vertical mixing of seawater from different strata. This restricts the availability of upwelling nutrients to phytoplankton. Since **zooplankton, which feed upon phytoplankton**, feed the rest of the food chain, the declines are inevitable. The **boldface** portion plays which one of the following roles in the argument?
- It is a hypothesis supported by the fact that phytoplankton feed on upwelling nutrients.
  - It is intended to provide an example of the ways in which the vertical mixing of seawater affects feeding habits.
  - It helps show how global temperature changes affect larger sea animals directly.
  - It is offered as one reason that global warming must be curtailed.
  - It is offered in support of the idea that global warming poses a threat to all organisms.
29. Nutritionist: Because humans have evolved very little since the development of agriculture, it is clear that **humans are still biologically adapted to a diet of wild foods**, consisting mainly of raw fruits and vegetables, nuts and seeds, lean meat, and seafood. Straying from this diet has often resulted in chronic illness and other physical problems. Thus, the more our diet consists of wild foods, the healthier we will be. The **boldface** portion plays which one of the following roles in the argument?
- It is a conclusion for which the only support offered is the claim that straying from a diet of wild foods has often resulted in chronic illness and other physical problems.
  - It is a premise for which no justification is provided, but which is used to support the argument's main conclusion.
  - It is a phenomenon for which the main conclusion of the nutritionist's argument is cited as an explanation.
  - It is an intermediate conclusion for which one claim is offered as support, and which is used in turn to support the argument's main conclusion.
  - It is a premise offered in support of the claim that humans have evolved very little since the development of agriculture.

30. Pedigreed dogs, including those officially classified as working dogs, must conform to standards set by organizations that issue pedigrees. Those standards generally specify the physical appearance necessary for a dog to be recognized as belonging to a breed but stipulate nothing about other genetic traits, such as those that enable breeds originally developed as working dogs to perform the work for which they were developed. Since dog breeders try to maintain only those traits specified by pedigree organizations, and traits that breeders do not try to maintain risk being lost, **certain traits like herding ability risk being lost among pedigreed dogs**. Therefore, pedigree organizations should set standards requiring working ability in pedigreed dogs classified as working dogs. The **boldface** portion plays which one of the following roles in the argument?
- It is a claim on which the argument depends but for which no support is given.
  - It is a subsidiary conclusion used in support of the main conclusion.
  - It acknowledges a possible objection to the proposal put forth in the argument.
  - It summarizes the position that the argument as a whole is directed toward discrediting.
  - It provides evidence necessary to support a claim stated earlier in the argument.
31. Professor Jones has claimed that chemical compound chlorocetin contained in industrial waste and previously considered harmless is in fact very dangerous. Jones has examined several areas with high concentration of chlorocetin and found that **certain vital biological processes, such as photosynthesis, are slower in these areas than is usual for the inspected species**. The professor says that although he failed to establish an exact mechanism by which chlorocetin hampers photosynthesis, his findings are sufficient to state that chlorocetin is a dangerous chemical affecting natural world. This conclusion, however, is unwarranted because **all that Professor Jones actually established is a mere correlation between the level of chlorocetin and the speed of photosynthesis** – correlation that might not reflect any causal relationship between the factors. The highlighted portions of the text perform which of the following functions in the argument?
- the first is the position the author disagrees with while the second is the author's own position
  - the first contains the argument the author critiques while the second identifies a logical flaw in this argument
  - the first is an evidence in the argument the author disputes while the second is a statement supporting the author's own position
  - the first describes a phenomenon which weighs against the author's opinion while the second reasons in favor of this opinion
  - the first contains information that, if true, could overthrow the author's argument while the second discredits this information
32. Business Consultant: Some corporations shun the use of executive titles because they fear that **the use of titles indicating position in the corporation tends to inhibit communication up and down the corporate hierarchy**. Since an executive who uses a title is treated with more respect by outsiders, however, **use of a title can facilitate an executive's dealings with external businesses**. The obvious compromise is for these executives to use their corporate titles externally but not internally, since even if it is widely known that the corporation's executives use executive titles outside their organization, this knowledge does not by itself inhibit communication within the corporation. In the consultant's reasoning, the two portions in **boldface** play which of the following roles?
- The first presents an obstacle to achieving a certain goal; the second presents a reason for considering that goal to be undesirable.
  - The first is a consideration that has led to the adoption of a certain strategy; the second presents a reason against adopting that strategy.
  - The first describes a concern that the consultant dismisses as insignificant; the second is a consideration that serves as the basis for that dismissal.
  - The first is a belief for which the consultant offers support; the second is part of that support.
  - The first is a belief against which evidence is offered; the second is part of the evidence offered against that belief.

33. Critics of certain pollution-control regulations have claimed that **the money spent over the last decade in order to reduce emissions of carbon monoxide and of volatile organic compounds has been wasted**. The evidence they offer in support of this claim might appear compelling: despite the money spent, annual emissions of these pollutants have been increasing steadily. This evidence is far from adequate, however, since **over the last decade a substantial number of new industrial facilities that emit these pollutants have been built**. In the reasoning given, the two portions in **boldface** play which of the following roles?
- The first identifies a claim that the reasoning seeks to show is false; the second is evidence that has been cited by others in support of that claim.
  - The first identifies a claim that the reasoning seeks to show is false; the second is a position for which the reasoning seeks to provide support.
  - The first is a position that the reasoning contends is inadequately supported by the evidence; the second is a position for which the reasoning seeks to provide support.
  - The first is a position that the reasoning contends is inadequately supported by the evidence; the second is evidence used to support the reasoning's contention.
  - The first is a position that the reasoning contends is inadequately supported by the evidence; the second is evidence that has been used to support that position.
34. Astronomer: Observations of the Shoemaker-Levi comet on its collision course with Jupiter showed that the comet broke into fragments before entering Jupiter's atmosphere in 1994, but they did not show how big those fragments were. Nevertheless, some indication of their size can be inferred from spectrographic analyses of Jupiter's outer atmosphere. **After the fragments' entry, these analyses revealed unprecedented traces of sulfur**. The fragments themselves almost certainly contained no sulfur, but astronomers believe that the cloud layer below Jupiter's outer atmosphere does contain sulfur. Since **sulfur would have seeped into the outer atmosphere if comet fragments had penetrated this cloud layer**, it is likely that some of the fragments were at least large enough to have passed through Jupiter's outer atmosphere without being burned up. In the astronomer's argument, the two portions in **boldface** play which of the following roles?
- The first is a claim that the astronomer seeks to show is true; the second acknowledges a consideration that weighs against the truth of that claim.
  - The first is a claim that the astronomer seeks to show is true; the second provides evidence in support of the truth of that claim.
  - The first and the second are each considerations advanced in support of the conclusion of the argument.
  - The first provides evidence in support of the conclusion of the argument; the second is that conclusion.
  - The first is a circumstance for which the astronomer seeks to provide an explanation; the second acknowledges a consideration that weighs against the explanation provided by the astronomer.

### Critical Reasoning Topic 8: Miscellaneous

- If, in a tennis tournament, a match reaches a fifth-set tiebreak, the lower-ranked player always loses the tiebreak (and, therefore, the match). If Rafael, the second-ranked player, wins a tournament by beating Roger, the top-ranked player, then the match must not have included a fifth-set tiebreak. *Which of the following arguments most closely mimics the reasoning used in the above argument?*
  - If a woman with a family history of twins gets pregnant three times, she will have one set of twins. Jennifer, who falls into this category, had two sets of twins, so she must not have gotten pregnant exactly three times.
  - If a salesman sells more product than anyone else in a calendar year, then he will earn an all-expenses-paid vacation. Joe earned an all-expense-paid vacation, so he must have sold more product than anyone else for the year.
  - A newspaper can charge a 50% premium for ads if its circulation surpasses 100,000; if the circulation does not pass 100,000, therefore, the newspaper can't charge any kind of premium for ads.
  - If a student is in the top 10% of her class, she will earn a college scholarship. Anna is not in the top 10% of her class, so she will not earn a scholarship.
  - All of the players on a football team receive a cash bonus if the team wins the Super Bowl. If quarterback Tom Brady earned a cash bonus last year, he must have been a member of the winning Super Bowl team.



2. Studies show that repeated exposure to an allergen can trigger an allergic person's defense mechanisms to the extent that eventually, even minimal exposure to the allergen can provoke a stronger than normal, even life-threatening reaction. *Which of the following is the best analogy for the process by which minimal contact with an allergen can cause a major reaction?*
- People with unhealthy diets are more susceptible to diabetes and high blood pressure.
  - Because minor earthquakes can weaken the existing infrastructure in an area, a series of minor earthquakes can sometimes lead to more damage than a single major earthquake.
  - Peanut allergy sufferers should avoid all potential contact with peanuts.
  - A student who fails a test can still earn a good grade if she works hard for the rest of the semester.
  - Drivers who speed regularly are more likely to be caught than those who speed only occasionally.
3. The "Doppler effect" refers to the perceived change in pitch that occurs when the source of a sound is in motion relative to the observer. For example, the siren on a passing police car will sound higher than its true pitch as the car approaches, sound the same as its true pitch as the car passes, and sound lower than its true pitch as the car travels away from the observer. *If two trains pass each other going opposite directions on parallel east-west tracks, which of the following observations provides another illustration of the effect described above?*
- If the eastbound train blows its horn as they pass, passengers on the westbound train will hear a sound that decreases in pitch.
  - If the eastbound train blows its horn as they pass, passengers on the westbound train will hear a sound that increases in pitch.
  - If the eastbound train blows its horn as they pass, passengers on the eastbound train will hear a sound that decreases in pitch.
  - If the eastbound train blows its horn as they pass, passengers on the eastbound train will hear a sound that increases in pitch.
  - If the eastbound train blows its horn as they pass, passengers on the eastbound train will hear a sound that is steady in pitch.
4. **Jim:** The United States Mint has recently announced that the rising cost of raw copper, nickel, and zinc has pushed the cost of manufacturing each penny and nickel to more than 1 cent and 5 cents respectively. In addition, there are very few, if any, items that can be purchased for 5 cents, and virtually none that can be purchased for a penny. Since it appears that both the penny and the nickel no longer provide a necessary function in today's economy, I propose that the government simply stop minting the coins at a loss and declare the base unit of U.S. currency to be the dime.
- Mary:** Don't be silly. This would mean that all prices would round up to the nearest dime and nobody would go for that. There is simply no way that Congress would approve, much less consider, such an unpopular measure. *In her response to Jim, Mary does all of the following EXCEPT:*
- Makes an assumption about how Jim's proposal would affect prices.
  - Implies that Congressional approval is necessary for Jim's proposal to take effect.
  - Provides a reason why Jim's proposal would be difficult to implement, regardless of its justification.
  - Assumes that Congress will never approve a policy that has little public support.
  - Attempts to undermine all or some of the premises upon which Jim justifies his proposal.
5. Owner of JavaJoint: Over the past year, the coffee store has become a daily hang-out for more and more teenagers. Many of our adult customers do not appear comfortable with this kind of crowd and some of them have told me that they will no longer stop here for a coffee drink. Since my goal is to maximize our revenue, I want you to discourage teenagers from coming here and start cultivating a more adult crowd. Store manager: Are you sure? On average, each teenager spends just as much as the average adult does, and we have far more new customers than we have lost over the past year. *The store manager responds to the owner by*
- questioning the veracity of owner's evidence
  - arguing that it would be difficult to implement the owner's directive
  - offering new evidence implying that the status quo is not incompatible with the owner's goal
  - demonstrating that the average teenage customer is as profitable as the average adult customer
  - offering new evidence refuting that presented by the owner

6. Garbage in this neighborhood probably will not be collected until Thursday this week. Garbage is usually collected here on Wednesdays, and the garbage collectors in this city are extremely reliable. However, Monday was a public holiday, and after a public holiday that falls on a Monday, garbage throughout the city is supposed to be collected one day later than usual. The argument proceeds by
- treating several pieces of irrelevant evidence as though they provide support for the conclusion
  - indirectly establishing that one thing is likely to occur by directly ruling out all of the alternative possibilities
  - providing information that allows application of a general rule to a specific case
  - generalizing about all actions of a certain kind on the basis of a description of one such action
  - treating something that is probable as though it were inevitable
7. Jane: Professor Harper's ideas for modifying the design of guitars are of no value because there is no general agreement among musicians as to what a guitar should sound like and, consequently, no widely accepted basis for evaluating the merits of a guitar's sound.  
Mark: What's more, Harper's ideas have had enough time to be adopted if they really resulted in superior sound. It took only ten years for the Torres design for guitars to be almost universally adopted because of the improvement it makes in tonal quality. Which one of the following most accurately describes the relationship between Jane's argument and Mark's argument?
- Mark's argument shows how a weakness in Jane's argument can be overcome.
  - Mark's argument has a premise in common with Jane's argument.
  - Mark and Jane use similar techniques to argue for different conclusions.
  - Mark's argument restates Jane's argument in other terms.
  - Mark's argument and Jane's argument are based on conflicting suppositions.
8. Jorge: You won't be able to write well about the rock music of the 1960s, since you were just an infant then. Rock music of the 1960s was created by and for people who were then in their teens and early twenties.  
Ruth: Your reasoning is absurd. There are living writers who write well about ancient Roman culture, even though those writers are obviously not a part of ancient Roman culture. Why should my youth alone prevent me from writing well about the music of a period as recent as the 1960s? Ruth responds to Jorge's criticism by
- challenging his claim that she was not in her teens or early twenties during the 1960s
  - clarifying a definition of popular culture that is left implicit in Jorge's argument
  - using the example of classical culture in order to legitimize contemporary culture as an object worthy of serious consideration
  - offering an analogy to counter an unstated assumption of Jorge's argument
  - casting doubt on her opponent's qualification to make judgments about popular culture
9. Anne: Halley's Comet, now in a part of its orbit relatively far from the Sun, recently flared brightly enough to be seen by telescope. No comet has ever been observed to flare so far from the Sun before, so such a flare must be highly unusual.  
Sue: Nonsense. Usually no one bothers to try to observe comets when they are so far from the Sun. This flare was observed only because an observatory was tracking Halley's Comet very carefully. Sue challenges Anne's reasoning by
- pointing out that Anne's use of the term "observed" is excessively vague
  - drawing attention to an inconsistency between two of Anne's claims
  - presenting evidence that directly contradicts Anne's evidence
  - offering an alternative explanation for the evidence Anne cites
  - undermining some of Anne's evidence while agreeing with her conclusion
10. Ingrid: Rock music has produced no songs as durable as the songs of the 1940s, which continue to be recorded by numerous performers.  
Jerome: True, rock songs are usually recorded only once. If the original recording continues to be popular, however, that fact can indicate durability, and the best rock songs will prove to be durable. Jerome responds to Ingrid's claim by
- intentionally misinterpreting the claim
  - showing that the claim necessarily leads to a contradiction
  - undermining the truth of the evidence that Ingrid presents
  - suggesting an alternative standard for judging the point at issue
  - claiming that Ingrid's knowledge of the period under discussion is incomplete

## CR Challenge Set (The Super 100)

1. The importance of the ozone layer to terrestrial animals is that it entirely filters out some wavelengths of light but lets others through. Holes in the ozone layer and the dangers associated with these holes are well documented. However, one danger that has not been given sufficient attention is that these holes could lead to severe eye damage for animals of many species. Which one of the following is most strongly supported by the statements above, if they are true?
  - A. All wavelengths of sunlight that can cause eye damage are filtered out by the ozone layer where it is intact.
  - B. Few species of animals live on a part of the earth's surface that is not threatened by holes in the ozone layer.
  - C. Some species of animals have eyes that will not suffer any damage when exposed to unfiltered sunlight.
  - D. A single wavelength of sunlight can cause severe damage to the eyes of most species of animals.
  - E. Some wavelengths of sunlight that cause eye damage are more likely to reach the earth's surface where there are holes in the ozone layer than where there are not.
2. One of the most vexing problems in historiography is dating an event when the usual sources offer conflicting chronologies of the event. Historians should attempt to minimize the number of competing sources, perhaps by eliminating the less credible ones. Once this is achieved and several sources are left, as often happens, historians may try, though on occasion unsuccessfully, to determine independently of the usual sources which date is more likely to be right. Which one of the following inferences is most strongly supported by the information above?
  - A. We have no plausible chronology of most of the events for which attempts have been made by historians to determine the right date.
  - B. Some of the events for which there are conflicting chronologies and for which attempts have been made by historians to determine the right date cannot be dated reliably by historians.
  - C. Attaching a reliable date to any event requires determining which of several conflicting chronologies is most likely to be true.
  - D. Determining independently of the usual sources which of several conflicting chronologies is more likely to be right is an ineffective way of dating events.
  - E. The soundest approach to dating an event for which the usual sources give conflicting chronologies is to undermine the credibility of as many of these sources as possible.
3. In an experiment, two-year-old boys and their fathers made pie dough together using rolling pins and other utensils. Each father-son pair used a rolling pin that was distinctively different from those used by the other father-son pairs, and each father repeated the phrase "rolling pin" each time his son used it. But when the children were asked to identify all of the rolling pins among a group of kitchen utensils that included several rolling pins, each child picked only the one that he had used. Which one of the following inferences is most supported by the information above?
  - A. The children did not grasp the function of a rolling pin.
  - B. No two children understood the name "rolling pin" to apply to the same object.
  - C. The children understood that all rolling pins have the same general shape.
  - D. Each child was able to identify correctly only the utensils that he had used.
  - E. The children were not able to distinguish the rolling pins they used from other rolling pins.
4. The increasing complexity of scientific inquiry has led to a proliferation of multi-authored technical articles. Reports of clinical trials involving patients from several hospitals are usually coauthored by physicians from each participating hospital. Likewise, physics papers reporting results from experiments using subsystems developed at various laboratories generally have authors from each laboratory. If all of the statements above are true, which one of the following must be true?
  - A. Clinical trials involving patients from several hospitals are never conducted solely by physicians from just one hospital.
  - B. Most reports of clinical trials involving patients from several hospitals have multiple authors.
  - C. When a technical article has multiple authors, they are usually from different institutions.
  - D. Physics papers authored by researchers from multiple laboratories usually report results from experiments using subsystems developed at each laboratory.
  - E. Most technical articles are authored solely by the researchers who conducted the experiments these articles report.

5. Some environmentalists question the prudence of exploiting features of the environment, arguing that there are no economic benefits to be gained from forests, mountains, or wetlands that no longer exist. Many environmentalists claim that because nature has intrinsic value it would be wrong to destroy such features of the environment, even if the economic costs of doing so were outweighed by the economic costs of not doing so. Which one of the following can be logically inferred from the passage?
- A. It is economically imprudent to exploit features of the environment.
  - B. Some environmentalists appeal to a non-economic justification in questioning the defensibility of exploiting features of the environment.
  - C. Most environmentalists appeal to economic reasons in questioning the defensibility of exploiting features of the environment.
  - D. Many environmentalists provide only a non-economic justification in questioning the defensibility of exploiting features of the environment.
  - E. Even if there is no economic reason for protecting the environment, there is a sound non-economic justification for doing so.
6. Some argue that laws are instituted at least in part to help establish a particular moral fabric in society. But the primary function of law is surely to help order society so that its institutions, organizations, and citizenry can work together harmoniously, regardless of any further moral aims of the law. Indeed, the highest courts have on occasion treated moral beliefs based on conscience or religious faith as grounds for making exceptions in the application of laws. The statements above, if true, most strongly support which one of the following?
- A. The manner in which laws are applied sometimes takes into account the beliefs of the people governed by those laws.
  - B. The law has as one of its functions the ordering of society but is devoid of moral aims.
  - C. Actions based on religious belief or on moral conviction tend to receive the protection of the highest courts.
  - D. The way a society is ordered by law should not reflect any moral convictions about the way society ought to be ordered.
  - E. The best way to promote cooperation among a society's institutions, organizations, and citizenry is to institute order in that society by means of law.
7. Newtonian physics dominated science for over two centuries. It found consistently successful application, becoming one of the most highly substantiated and accepted theories in the history of science. Nevertheless, Einstein's theories came to show the fundamental limits of Newtonian physics and to surpass the Newtonian view in the early 1900s, giving rise once again to a physics that has so far enjoyed wide success. Which one of the following logically follows from the statements above?
- A. The history of physics is characterized by a pattern of one successful theory subsequently surpassed by another.
  - B. Long-standing success or substantiation of a theory of physics is no guarantee that the theory will continue to be dominant indefinitely.
  - C. Every theory of physics, no matter how successful, is eventually surpassed by one that is more successful.
  - D. Once a theory of physics is accepted, it will remain dominant for centuries.
  - E. If a long-accepted theory of physics is surpassed, it must be surpassed by a theory that is equally successful.
8. The solidity of bridge piers built on pilings depends largely on how deep the pilings are driven. Prior to 1700, pilings were driven to "refusal," that is, to the point at which they refused to go any deeper. In a 1588 inquiry into the solidity of piers for Venice's Rialto Bridge, it was determined that the bridge's builder, Antonio Da Ponte, had met the contemporary standard for refusal: he had caused the pilings to be driven until additional penetration into the ground was no greater than two inches after twenty-four hammer blows. Which one of the following can properly be inferred from the passage?
- A. The Rialto Bridge was built on unsafe pilings.
  - B. The standard of refusal was not sufficient to ensure the safety of a bridge.
  - C. Da Ponte's standard of refusal was less strict than that of other bridge builders of his day.
  - D. After 1588, no bridges were built on pilings that were driven to the point of refusal.
  - E. It is possible that the pilings of the Rialto Bridge could have been driven deeper even after the standard of refusal had been met.

9. Every moral theory developed in the Western tradition purports to tell us what a good life is. However, most people would judge someone who perfectly embodied the ideals of any one of these theories not to be living a good life—the kind of life they would want for themselves and their children. The statements above, if true, most strongly support which one of the following?
- A. Most people desire a life for themselves and their children that is better than a merely good life.
  - B. A person who fits the ideals of one moral theory in the Western tradition would not necessarily fit the ideals of another.
  - C. Most people have a conception of a good life that does not match that of any moral theory in the Western tradition.
  - D. A good life as described by moral theories in the Western tradition cannot be realized.
  - E. It is impossible to develop a theory that accurately describes what a good life is.
10. Mystery stories often feature a brilliant detective and the detective's dull companion. Clues are presented in the story, and the companion wrongly infers an inaccurate solution to the mystery using the same clues that the detective uses to deduce the correct solution. Thus, the author's strategy of including the dull companion gives readers a chance to solve the mystery while also diverting them from the correct solution. Which one of the following is most strongly supported by the information above?
- A. Most mystery stories feature a brilliant detective who solves the mystery presented in the story.
  - B. Mystery readers often solve the mystery in a story simply by spotting the mistakes in the reasoning of the detective's dull companion in that story.
  - C. Some mystery stories give readers enough clues to infer the correct solution to the mystery.
  - D. The actions of the brilliant detective in a mystery story rarely divert readers from the actions of the detective's dull companion.
  - E. The detective's dull companion in a mystery story generally uncovers the misleading clues that divert readers from the mystery's correct solution.
11. Cézanne's art inspired the next generation of artists, twentieth-century modernist creators of abstract art. While most experts rank Cézanne as an early modernist, a small few reject this idea. Françoise Cachin, for example, bluntly states that such an ascription is "overplayed," and says that Cézanne's work is "too often observed from a modern point of view." Which one of the following statements is most strongly supported by the information above?
- A. Cézanne's work is highly controversial.
  - B. Cézanne was an early creator of abstract art.
  - C. Cézanne's work helped to develop modernism.
  - D. Modern art owes less to Cézanne than many experts believe.
  - E. Cézanne's work tends to be misinterpreted as modernist.
12. Light is registered in the retina when photons hit molecules of the pigment rhodopsin and change the molecules' shape. Even when they have not been struck by photons of light, rhodopsin molecules sometimes change shape because of normal molecular motion, thereby introducing error into the visual system. The amount of this molecular motion is directly proportional to the temperature of the retina. Which one of the following conclusions is most strongly supported by the information above?
- A. The temperature of an animal's retina depends on the amount of light the retina is absorbing.
  - B. The visual systems of animals whose body temperature matches that of their surroundings are more error-prone in hot surroundings than in cold ones.
  - C. As the temperature of the retina rises, rhodopsin molecules react more slowly to being struck by photons.
  - D. Rhodopsin molecules are more sensitive to photons in animals whose retinas have large surface areas than in animals whose retinas have small surface areas.
  - E. Molecules of rhodopsin are the only pigment molecules that occur naturally in the retina.
13. Flavonoids are a common component of almost all plants, but a specific variety of flavonoid in apples has been found to be an antioxidant. Antioxidants are known to be a factor in the prevention of heart disease. Which one of the following can be properly inferred from the passage?
- A. A diet composed largely of fruits and vegetables will help to prevent heart disease.
  - B. Flavonoids are essential to preventing heart disease.
  - C. Eating at least one apple each day will prevent heart disease.
  - D. At least one type of flavonoid helps to prevent heart disease.
  - E. A diet deficient in antioxidants is a common cause of heart disease.

14. Sharks have a higher ratio of cartilage mass to body mass than any other organism. They also have a greater resistance to cancer than any other organism. Shark cartilage contains a substance that inhibits tumor growth by stopping the development of a new blood network. In the past 20 years, none of the responses among terminal cancer patients to various therapeutic measures has been more positive than the response among those who consumed shark cartilage. ***If the claims made above are true, then each of the following could be true EXCEPT:***
- (A) No organism resists cancer better than sharks do, but some resist cancer as well as sharks.
  - (B) The organism most susceptible to cancer has a higher percentage of cartilage than some organisms that are less susceptible to cancer.
  - (C) The substance in shark cartilage that inhibits tumor growth is found in most organisms.
  - (D) In the past 20 years many terminal cancer patients have improved dramatically following many sorts of therapy
  - (E) Some organisms have immune systems more efficient than a shark's immune system.
15. Good students learn more than what their parents and teachers compel them to learn. This requires that these students derive pleasure from the satisfaction of their curiosity, and one cannot experience such pleasure unless one is capable of concentrating on a topic so intently that one loses track of one's own identity. If the statements above are true, each of the following could also be true EXCEPT:
- (A) Some people who are capable of becoming so absorbed in a topic that they lose track of their own identities are nevertheless incapable of deriving pleasure from the satisfaction of their curiosity.
  - (B) Most good students do not derive pleasure from the satisfaction of their curiosity.
  - (C) Many people who derive pleasure simply from the satisfaction of their curiosity are not good students.
  - (D) Some people who are not good students derive pleasure from losing track of their own identities.
  - (E) Most people who are capable of becoming so absorbed in a topic that they lose track of their own identities are not good students.
16. For a ten-month period, the total monthly sales of new cars within the country of Calistan remained constant. During this period the monthly sales of new cars manufactured by Marvel Automobile Company doubled, and its share of the new car market within Calistan increased correspondingly. At the end of this period, emission standards were imposed on new cars sold within Calistan. During the three months following this imposition, Marvel Automobile Company's share of the Calistan market declined substantially even though its monthly sales within Calistan remained constant at the level reached in the last month of the ten-month period. If the statements above are true, which one of the following CANNOT be true?
- (A) The total monthly sales within Calistan of new cars by companies other than Marvel Automobile Company decreased over the three months following the imposition of the emission standards.
  - (B) Over the three months before the imposition of the emission standards, the combined market share of companies other than Marvel Automobile Company selling new cars in Calistan decreased.
  - (C) If the emission standards had not been imposed, Marvel Automobile Company would have lost an even larger share of the number of new cars sold in Calistan than, in fact, it did.
  - (D) A decrease in the total monthly sales of new cars within Calistan will occur if the emission standards remain in effect.
  - (E) Since the imposition of the emission standards, Marvel Automobile Company's average profit on each new car sold within Calistan has increased.
17. Two things are true of all immoral actions. First, if they are performed in public, they offend public sensibilities. Second, they are accompanied by feelings of guilt. If all the statements above are true, then which one of the following must be false?
- (A) Some immoral actions that are not performed in public are not accompanied by feelings of guilt.
  - (B) Immoral actions are wrong solely by virtue of being accompanied by feelings of guilt.
  - (C) Some actions that offend public sensibilities if they are performed in public are not accompanied by feelings of guilt.
  - (D) Some actions that are accompanied by feelings of guilt are not immoral, even if they frequently offend public sensibilities.
  - (E) Every action performed in public that is accompanied by feelings of guilt is immoral.

18. Journalist: A free marketplace of ideas ensures that all ideas get a fair hearing. Even ideas tainted with prejudice and malice can prompt beneficial outcomes. In most countries, however, the government is responsible for over half the information released to the public through all media. For this reason, the power of governments over information needs to be curtailed. Everyone grants that governments should not suppress free expression, yet governments continue to construct near monopolies on the publication and dissemination of enormous amounts of information. Which one of the following most accurately expresses the conclusion of the journalist's argument?
- The freedom of the marketplace of ideas is in jeopardy.
  - Preserving a free marketplace of ideas is important.
  - The control that governments have over information needs to be reduced.
  - Ideas that have malicious content or stem from questionable sources can be valuable.
  - Governments have near monopolies on the dissemination of many kinds of information.
19. I agree that Hogan's actions resulted in grievous injury to Winters. And I do not deny that Hogan fully realized the nature of his actions and the effects that they would have. Indeed, I would not disagree if you pointed out that intentionally causing such effects is reprehensible, other things being equal. But in asking you to concur with me that Hogan's actions not be wholly condemned I emphasize again that Hogan mistakenly believed Winters to be the robber who had been terrorizing west-side apartment buildings for the past several months. Which one of the following most accurately expresses the conclusion of the argument?
- Hogan should not be considered responsible for the injuries sustained by Winters.
  - The robber who had been terrorizing west-side apartment buildings should be considered to be as responsible for Winters's injuries as Hogan.
  - The actions of Hogan that seriously injured Winters are not completely blameworthy.
  - Hogan thought that Winters was the person who had been terrorizing west-side apartment buildings for the last few months.
  - The actions of Hogan that seriously injured Winters were reprehensible, other things being equal.
20. Last month OCF, Inc., announced what it described as a unique new product: an adjustable computer workstation. Three days later ErgoTech unveiled an almost identical product. The two companies claim that the similarities are coincidental and occurred because the designers independently reached the same solution to the same problem. The similarities are too fundamental to be mere coincidence, however. The two products not only look alike, but they also work alike. Both are oddly shaped with identically placed control panels with the same types of controls. Both allow the same types of adjustments and the same types of optional enhancements. The main point of the argument is that
- the two products have many characteristics in common
  - ErgoTech must have copied the design of its new product from OCF's design
  - the similarities between the two products are not coincidental
  - product designers sometimes reach the same solution to a given problem without consulting each other
  - new products that at first appear to be unique are sometimes simply variations of other products
21. Prediction, the hallmark of natural sciences, appears to have been possible by reducing phenomena to mathematical expressions. Some social scientists also want the power to predict accurately and assume they ought to perform the same reduction. But this would be a mistake; it would neglect data that are not easily mathematized and thereby would only distort the social phenomena. Which one of the following most accurately expresses the main conclusion of the argument?
- The social sciences do not have as much predictive power as the natural sciences.
  - Mathematics plays a more important role in the natural sciences than it does in the social sciences.
  - There is a need in the social sciences to improve the ability to predict.
  - Phenomena in the social sciences should not be reduced to mathematical formulas.
  - Prediction is responsible for the success of the natural sciences.
22. Psychologist: Although studies of young children have revealed important facts about the influence of the environment on language acquisition, it is clear that one cannot attribute such acquisition solely to environmental influences: innate mechanisms also play a role. So, the most reasonable question that ought to be studied is whether \_\_\_\_\_. Which one of the following most logically completes the passage?
- language acquisition can ever be fully explained
  - innate mechanisms are a contributing factor in language learning
  - language acquisition is solely the product of innate mechanisms
  - parents and peers are the most important influence on a child's learning of a language
  - innate mechanisms play a more important role in language acquisition than a child's immediate environment

23. People with serious financial problems are so worried about money that they cannot be happy. Their misery makes everyone close to them—family, friends, and colleagues—unhappy as well. Only if their financial problems are solved can they and those around them be happy. Which one of the following statements can be properly inferred from the passage?
- Only serious problems make people unhappy.
  - People who solve their serious financial problems will be happy.
  - People who do not have serious financial problems will be happy.
  - If people are unhappy, they have serious financial problems.
  - If people are happy, they do not have serious financial problems.
24. Some types of organisms originated through endosymbiosis, the engulfing of one organism by another so that a part of the former becomes a functioning part of the latter. An unusual nucleomorph, a structure that contains DNA and resembles a cell nucleus, has been discovered within a plant known as a chlorarachniophyte. Two versions of a particular gene have been found in the DNA of this nucleomorph, and one would expect to find only a single version of this gene if the nucleomorph were not the remains of an engulfed organism's nucleus. Which one of the following is most strongly supported by the information above?
- Only organisms of types that originated through endosymbiosis contain nucleomorphs.
  - A nucleomorph within the chlorarachniophyte holds all of the genetic material of some other organism.
  - Nucleomorphs originated when an organism endosymbiotically engulfed a chlorarachniophyte.
  - Two organisms will not undergo endosymbiosis unless at least one of them contains a nucleomorph.
  - Chlorarachniophytes emerged as the result of two organisms having undergone endosymbiosis.
25. If you have no keyboarding skills at all, you will not be able to use a computer. And if you are not able to use a computer, you will not be able to write your essays using a word processing program. If the statements above are true, which one of the following must be true?
- If you have some keyboarding skills, you will be able to write your essays using a word processing program.
  - If you are not able to write your essays using a word processing program, you have no keyboarding skills.
  - If you are able to write your essays using a word processing program, you have at least some keyboarding skills.
  - If you are able to use a computer, you will probably be able to write your essays using a word processing program.
  - If you are not able to write your essays using a word processing program, you are not able to use a computer.
26. The axis of Earth's daily rotation is tilted with respect to the plane of its orbit at an angle of roughly 23 degrees. That angle can be kept fairly stable only by the gravitational influence of Earth's large, nearby Moon. Without such a stable and moderate axis tilt, a planet's climate is too extreme and unstable to support life. Mars, for example, has only very small moons, tilts at wildly fluctuating angles, and cannot support life. If the statements above are true, which one of the following must also be true on the basis of them?
- If Mars had a sufficiently large nearby moon, Mars would be able to support life.
  - If Earth's Moon were to leave Earth's orbit Earth's climate would be unable to support life.
  - Any planet with a stable, moderate axis tilt can support life.
  - Gravitational influences other than moons have little or no effect on the magnitude of the tilt angle of either Earth's or Mars's axis.
  - No planet that has more than one moon can support life.
27. Editorialist: Drivers with a large number of demerit points who additionally have been convicted of a serious driving-related offense should either be sentenced to jail or be forced to receive driver reeducation, since to do otherwise would be to allow a crime to go unpunished. Only if such drivers are likely to be made more responsible drivers should driver re-education be recommended for them. Unfortunately, it is always almost impossible to make drivers with a large number of demerit points more responsible drivers. If the editorialist's statements are true, they provide the most support for which one of the following?
- Drivers with a large number of demerit points who have been convicted of a serious driving-related offense should be sent to jail.
  - Driver re-education offers the best chance of making drivers with a large number of demerit points responsible drivers.
  - Driver re-education is not a harsh enough punishment for anyone convicted of a serious driving-related offense who has also accumulated a large number of demerit points.
  - Driver re-education should not be recommended for those who have committed no serious driving-related offenses.
  - Drivers with a large number of demerit points but no conviction for a serious driving-related offense should receive driver re-education rather than jail.



28. Muscular strength is a limited resource, and athletic techniques help to use this resource efficiently. Since top athletes do not differ greatly from each other in muscular strength, it follows that a requirement for an athlete to become a champion is a superior mastery of athletic techniques. Which one of the following most accurately expresses the conclusion of the argument?
- A. Only champion athletes have a superior mastery of athletic techniques.
  - B. Superior muscular strength is a requirement for an athlete to become a champion.
  - C. No athlete can become a champion without a superior mastery of athletic techniques.
  - D. The differences in muscular strength between top athletes are not great.
  - E. Athletic techniques help athletes use limited resources efficiently.
29. If there are any inspired musical performances in the concert, the audience will be treated to a good show. But there will not be a good show unless there are sophisticated listeners in the audience, and to be a sophisticated listener one must understand one's musical roots. If all of the statements above are true, which one of the following must also be true?
- A. If there are no sophisticated listeners in the audience, then there will be no inspired musical performances in the concert.
  - B. No people who understand their musical roots will be in the audience if the audience will not be treated to a good show.
  - C. If there will be people in the audience who understand their musical roots, then at least one musical performance in the concert will be inspired.
  - D. The audience will be treated to a good show unless there are people in the audience who do not understand their musical roots.
  - E. If there are sophisticated listeners in the audience, then there will be inspired musical performances in the concert.
30. A politician can neither be reelected nor avoid censure by his or her colleagues if that politician is known to be involved in any serious scandals. Several prominent politicians have just now been shown to be involved in a conspiracy that turned into a serious scandal. These politicians will therefore not be reelected. If the statements above are all true, which one of the following statements must also be true?
- A. The prominent politicians cannot escape censure by their colleagues.
  - B. If there had been no scandal, the prominent politicians would be reelected.
  - C. No politician is censured unless he or she is known to be involved in a serious scandal.
  - D. The prominent politicians initially benefited from the conspiracy that caused the scandal.
  - E. Some politicians who are involved in scandalous conspiracies avoid detection and censure.
31. Leachate is a solution, frequently highly contaminated, that develops when water permeates a landfill site. If and only if the landfill's capacity to hold liquids is exceeded does the leachate escape into the environment, generally in unpredictable quantities. A method must be found for disposing of leachate. Most landfill leachate is sent directly to sewage treatment plants, but not all sewage plants are capable of handling the highly contaminated water. Which one of the following can be inferred from the passage?
- A. The ability to predict the volume of escaping landfill leachate would help solve the disposal problem.
  - B. If any water permeates a landfill, leachate will escape into the environment.
  - C. No sewage treatment plants are capable of handling leachate.
  - D. Some landfill leachate is sent to sewage treatment plants that are incapable of handling it.
  - E. If leachate does not escape from a landfill into the environment, then the landfill's capacity to hold liquids has not been exceeded.
32. From 1973 to 1989 total energy use in this country increased less than 10 percent. However, the use of electrical energy in this country during this same period grew by more than 50 percent, as did the gross national product—the total value of all goods and services produced in the nation. If the statements above are true, then which one of the following must also be true?
- A. Most of the energy used in this country in 1989 was electrical energy.
  - B. From 1973 to 1989 there was a decline in the use of energy other than electrical energy in this country.
  - C. From 1973 to 1989 there was an increase in the proportion of energy use in this country that consisted of electrical energy use.
  - D. In 1989 electrical energy constituted a larger proportion of the energy used to produce the gross national product than did any other form of energy.
  - E. In 1973 the electrical energy that was produced constituted a smaller proportion of the gross national product than did all other forms of energy combined.

33. The number of North American children who are obese—that is, who have more body fat than do 85 percent of North American children their age—is steadily increasing, according to four major studies conducted over the past 15 years. If the finding reported above is correct, it can be properly concluded that
- A. when four major studies all produce similar results, those studies must be accurate
  - B. North American children have been progressively less physically active over the past 15 years
  - C. the number of North American children who are not obese increased over the past 15 years
  - D. over the past 15 years, the number of North American children who are underweight has declined
  - E. the incidence of obesity in North American children tends to increase as the children grow older
34. Ditrana is a federation made up of three autonomous regions: Korva, Mitro, and Guadar. Under the federal revenue-sharing plan, each region receives a share of federal revenues equal to the share of the total population of Ditrana residing in that region, as shown by a yearly population survey. Last year, the percentage of federal revenues Korva received for its share decreased somewhat even though the population survey on which the revenue-sharing was based showed that Korva's population had increased. If the statements above are true, which one of the following must also have been shown by the population survey on which last year's revenue-sharing in Ditrana was based?
- A. Of the three regions, Korva had the smallest number of residents.
  - B. The population of Korva grew by a smaller percentage than it did in previous years.
  - C. The populations of Mitro and Guadar each increased by a percentage that exceeded the percentage by which the population of Korva increased.
  - D. Of the three regions, Korva's numerical increase in population was the smallest.
  - E. Korva's population grew by a smaller percentage than did the population of at least one of the other two autonomous regions.
35. Students from outside the province of Markland, who in any given academic year pay twice as much tuition each as do students from Markland, had traditionally accounted for at least two-thirds of the enrollment at Central Markland College. Over the past 10 years academic standards at the college have risen, and the proportion of students who are not Marklanders has dropped to around 40 percent. Which one of the following can be properly inferred from the statements above?
- A. If it had not been for the high tuition paid by students from outside Markland, the college could not have improved its academic standards over the past 10 years.
  - B. If academic standards had not risen over the past 10 years, students who are not Marklanders would still account for at least two-thirds of the college's enrollment.
  - C. Over the past 10 years, the number of students from Markland increased and the number of students from outside Markland decreased.
  - D. Over the past 10 years, academic standards at Central Markland College have risen by more than academic standards at any other college in Markland.
  - E. If the college's per capita revenue from tuition has remained the same, tuition fees have increased over the past 10 years.
36. Most antidepressant drugs cause weight gain. While dieting can help reduce the amount of weight gained while taking such antidepressants, some weight gain is unlikely to be preventable. The information above most strongly supports which one of the following?
- A. A physician should not prescribe any antidepressant drug for a patient if that patient is overweight.
  - B. People who are trying to lose weight should not ask their doctors for an antidepressant drug.
  - C. At least some patients taking antidepressant drugs gain weight as a result of taking them.
  - D. The weight gain experienced by patients taking antidepressant drugs should be attributed to lack of dieting.
  - E. All patients taking antidepressant drugs should diet to maintain their weight.
37. Maria won this year's local sailboat race by beating Sue, the winner in each of the four previous years. We can conclude from this that Maria trained hard. The conclusion follows logically if which one of the following is assumed?
- A. Sue did not train as hard as Maria trained.
  - B. If Maria trained hard, she would win the sailboat race.
  - C. Maria could beat a four-time winner only if she trained hard.
  - D. If Sue trained hard, she would win the sailboat race.
  - E. Sue is usually a faster sailboat racer than Maria.

38. If something would have been justifiably regretted if it had occurred, then it is something that one should not have desired in the first place. It follows that many forgone pleasures should not have been desired in the first place. The conclusion above follows logically if which one of the following is assumed?
- A. One should never regret one's pleasures.
  - B. Forgone pleasures that were not desired would not have been justifiably regretted.
  - C. Everything that one desires and then regrets not having is a forgone pleasure.
  - D. Many forgone pleasures would have been justifiably regretted.
  - E. Nothing that one should not have desired in the first place fails to be a pleasure.
39. Psychiatrist: Take any visceral emotion you care to consider. There are always situations in which it is healthy to try to express that emotion. So, there are always situations in which it is healthy to try to express one's anger. The conclusion of the argument follows logically if which one of the following is assumed?
- A. Anger is always expressible.
  - B. Anger is a visceral emotion.
  - C. Some kinds of emotions are unhealthy to express.
  - D. All emotions that are healthy to express are visceral.
  - E. An emotion is visceral only if it is healthy to express.
40. Marian Anderson, the famous contralto, did not take success for granted. We know this because Anderson had to struggle early in life, and anyone who has to struggle early in life is able to keep a good perspective on the world. The conclusion of the argument follows logically if which one of the following is assumed?
- A. Anyone who succeeds takes success for granted.
  - B. Anyone who is able to keep a good perspective on the world does not take success for granted.
  - C. Anyone who is able to keep a good perspective on the world has to struggle early in life.
  - D. Anyone who does not take success for granted has to struggle early in life.
  - E. Anyone who does not take success for granted is able to keep a good perspective on the world.
41. Columnist: Almost anyone can be an expert, for there are no official guidelines determining what an expert must know. Anybody who manages to convince some people of his or her qualifications in an area—whatever those may be—is an expert. The columnist's conclusion follows logically if which one of the following is assumed?
- A. Almost anyone can convince some people of his or her qualifications in some area.
  - B. Some experts convince everyone of their qualifications in almost every area.
  - C. Convincing certain people that one is qualified in an area requires that one actually be qualified in that area.
  - D. Every expert has convinced some people of his or her qualifications in some area.
  - E. Some people manage to convince almost everyone of their qualifications in one or more areas.
42. Vague laws set vague limits on people's freedom, which makes it impossible for them to know for certain whether their actions are legal. Thus, under vague laws people cannot feel secure. The conclusion follows logically if which one of the following is assumed?
- A. People can feel secure only if they know for certain whether their actions are legal.
  - B. If people do not know for certain whether their actions are legal, then they might not feel secure.
  - C. If people know for certain whether their actions are legal, they can feel secure.
  - D. People can feel secure if they are governed by laws that are not vague.
  - E. Only people who feel secure can know for certain whether their actions are legal.
43. Art historian: Great works of art have often elicited outrage when first presented; in Europe, Stravinsky's *Rite of Spring* prompted a riot, and Manet's *Déjeuner sur l'herbe* elicited outrage and derision. So, since it is clear that art is often shocking, we should not hesitate to use public funds to support works of art that many people find shocking. Which one of the following is an assumption that the art historian's argument requires in order for its conclusion to be properly drawn?
- A. Most art is shocking.
  - B. Stravinsky and Manet received public funding for their art.
  - C. Art used to be more shocking than it currently is.
  - D. Public funds should support art.
  - E. Anything that shocks is art.

44. In Western economies, more energy is used to operate buildings than to operate transportation. Much of the decline in energy consumption since the oil crisis of 1973 is due to more efficient use of energy in homes and offices. New building technologies, which make lighting, heating, and ventilation systems more efficient, have cut billions of dollars from energy bills in the West. Since energy savings from these efficiencies save several billion dollars per year today, we can conclude that 50 to 100 years from now they will save more than \$200 billion per year (calculated in current dollars). On which one of the following assumptions does the argument rely?
- A. Technology used to make buildings energy efficient will not become prohibitively expensive over the next century.
  - B. Another oil crisis will occur in the next 50 to 100 years.
  - C. Buildings will gradually become a less important consumer of energy than transportation.
  - D. Energy bills in the West will be \$200 billion lower in the next 50 to 100 years.
  - E. Energy-efficient technologies based on new scientific principles will be introduced in the next 50 to 100 years.
45. Emissions from automobiles that burn gasoline and automobiles that burn diesel fuel are threatening the quality of life on our planet, contaminating both urban air and global atmosphere. Therefore, the only effective way to reduce such emissions is to replace the conventional diesel fuel and gasoline used in automobiles with cleaner-burning fuels, such as methanol, that create fewer emissions. Which one of the following is an assumption on which the argument depends?
- A. Reducing the use of automobiles would not be a more effective means to reduce automobile emissions than the use of methanol.
  - B. There is no fuel other than methanol that is cleaner-burning than both diesel fuel and gasoline.
  - C. If given a choice of automobile fuels, automobile owners would not select gasoline over methanol.
  - D. Automobile emissions constitute the most serious threat to the global environment.
  - E. At any given time there is a direct correlation between the level of urban air pollution and the level of contamination present in the global atmosphere.
46. Doctors in Britain have long suspected that patients who wear tinted eyeglasses are abnormally prone to depression and hypochondria. Psychological tests given there to hospital patients admitted for physical complaints like heart pain and digestive distress confirmed such a relationship. Perhaps people whose relationship to the world is psychologically painful choose such glasses to reduce visual stimulation, which is perceived as irritating. At any rate, it can be concluded that when such glasses are worn, it is because the wearer has a tendency to be depressed or hypochondriacal. The argument assumes which one of the following?
- A. Depression is not caused in some cases by an organic condition of the body.
  - B. Wearers do not think of the tinted glasses as a means of distancing themselves from other people.
  - C. Depression can have many causes, including actual conditions about which it is reasonable for anyone to be depressed.
  - D. For hypochondriacs wearing tinted glasses, the glasses serve as a visual signal to others that the wearer's health is delicate.
  - E. The tinting does not dim light to the eye enough to depress the wearer's mood substantially.
47. Columnist: A democratic society cannot exist unless its citizens have established strong bonds of mutual trust. Such bonds are formed and strengthened only by participation in civic organizations, political parties, and other groups outside the family. It is obvious then that widespread reliance on movies and electronic media for entertainment has an inherently corrosive effect on democracy. Which one of the following is an assumption on which the columnist's argument depends?
- A. Anyone who relies on movies and electronic media for entertainment is unable to form a strong bond of mutual trust with a citizen.
  - B. Civic organizations cannot usefully advance their goals by using electronic media.
  - C. Newspapers and other forms of print media strengthen, rather than weaken, democratic institutions.
  - D. Relying on movies and electronic media for entertainment generally makes people less likely to participate in groups outside their families.
  - E. People who rely on movies and electronic media for entertainment are generally closer to their families than are those who do not.

48. Barnes: The two newest employees at this company have salaries that are too high for the simple tasks normally assigned to new employees and duties that are too complex for inexperienced workers. Hence, the salaries and the complexity of the duties of these two newest employees should be reduced. Which one of the following is an assumption on which Barnes's argument depends?
- A. The duties of the two newest employees are not less complex than any others in the company.
  - B. It is because of the complex duties assigned that the two newest employees are being paid more than is usually paid to newly hired employees.
  - C. The two newest employees are not experienced at their occupations.
  - D. Barnes was not hired at a higher-than-average starting salary.
  - E. The salaries of the two newest employees are no higher than the salaries that other companies pay for workers with a similar level of experience.
49. The current pattern of human consumption of resources, in which we rely on nonrenewable resources, for example metal ore, must eventually change. Since there is only so much metal ore available, ultimately we must either do without or turn to renewable resources to take its place. Which one of the following is an assumption required by the argument?
- A. There are renewable resource replacements for all of the nonrenewable resources currently being consumed.
  - B. We cannot indefinitely replace exhausted nonrenewable resources with other nonrenewable resources.
  - C. A renewable resource cannot be exhausted by human consumption.
  - D. Consumption of nonrenewable resources will not continue to increase in the near future.
  - E. Ultimately we cannot do without nonrenewable resources.
50. In humans, ingested protein is broken down into amino acids, all of which must compete to enter the brain. Subsequent ingestion of sugars leads to the production of insulin, a hormone that breaks down the sugars and also rids the bloodstream of residual amino acids, except for tryptophan. Tryptophan then slips into the brain uncontested and is transformed into the chemical serotonin, increasing the brain's serotonin level. Thus, sugars can play a major role in mood elevation, helping one to feel relaxed and anxiety-free. Which one of the following is an assumption on which the argument depends?
- A. Elevation of mood and freedom from anxiety require increasing the level of serotonin in the brain.
  - B. Failure to consume foods rich in sugars results in anxiety and a lowering of mood.
  - C. Serotonin can be produced naturally only if tryptophan is present in the bloodstream.
  - D. Increasing the level of serotonin in the brain promotes relaxation and freedom from anxiety.
  - E. The consumption of protein-rich foods results in anxiety and a lowering of mood.
51. Publicity campaigns for endangered species are unlikely to have much impact on the most important environmental problems, for while the ease of attributing feelings to large mammals facilitates evoking sympathy for them, it is more difficult to elicit sympathy for other kinds of organisms, such as the soil microorganisms on which large ecosystems and agriculture depend. Which one of the following is an assumption on which the argument depends?
- A. The most important environmental problems involve endangered species other than large mammals.
  - B. Microorganisms cannot experience pain or have other feelings.
  - C. Publicity campaigns for the environment are the most effective when they elicit sympathy for some organism.
  - D. People ignore environmental problems unless they believe the problems will affect creatures with which they sympathize.
  - E. An organism can be environmentally significant only if it affects large ecosystems or agriculture.
52. Historian: Leibniz, the seventeenth-century philosopher, published his version of calculus before Newton did. But then Newton revealed his private notebooks, which showed he had been using these ideas for at least a decade before Leibniz's publication. Newton also claimed that he had disclosed these ideas to Leibniz in a letter shortly before Leibniz's publication. Yet close examination of the letter shows that Newton's few cryptic remarks did not reveal anything important about calculus. Thus, Leibniz and Newton each independently discovered calculus. Which one of the following is an assumption required by the historian's argument?
- A. Leibniz did not tell anyone about calculus prior to publishing his version of it.
  - B. No third person independently discovered calculus prior to Newton and Leibniz.
  - C. Newton believed that Leibniz was able to learn something important about calculus from his letter to him.
  - D. Neither Newton nor Leibniz knew that the other had developed a version of calculus prior to Leibniz's publication.
  - E. Neither Newton nor Leibniz learned crucial details about calculus from some third source.

53. In 1980, Country A had a per capita gross domestic product (GDP) that was \$5,000 higher than that of the European Economic Community. By 1990, the difference, when adjusted for inflation, had increased to \$6,000. Since a rising per capita GDP indicates a rising average standard of living, the average standard of living in Country A must have risen between 1980 and 1990. Which one of the following is an assumption on which the argument depends?
- A. Between 1980 and 1990, Country A and the European Economic Community experienced the same percentage increase in population.
  - B. Between 1980 and 1990, the average standard of living in the European Economic Community fell.
  - C. Some member countries of the European Economic Community had, during the 1980s, a higher average standard of living than Country A.
  - D. The per capita GDP of the European Economic Community was not lower by more than \$1,000 in 1990 than it had been in 1980.
  - E. In 1990, no member country of the European Economic Community had a per capita GDP higher than that of Country A.
54. Carl is clearly an incompetent detective. He has solved a smaller percentage of the cases assigned to him in the last 3 years—only 1 out of 25—than any other detective on the police force. Which one of the following, if true, most seriously weakens the argument above?
- A. Because the police chief regards Carl as the most capable detective, she assigns him only the most difficult cases, ones that others have failed to solve.
  - B. Before he became a detective, Carl was a neighborhood police officer and was highly respected by the residents of the neighborhood he patrolled.
  - C. Detectives on the police force on which Carl serves are provided with extensive resources, including the use of a large computer database, to help them solve crimes.
  - D. Carl was previously a detective in a police department in another city, and in the 4 years he spent there, he solved only 1 out of 30 crimes.
  - E. Many of the officers in the police department in which Carl serves were hired or promoted within the last 5 years.
55. Beverage company representative: The plastic rings that hold six-packs of beverage cans together pose a threat to wild animals, which often become entangled in the discarded rings and suffocate as a result. Following our lead, all beverage companies will soon use only those rings consisting of a new plastic that disintegrates after only three days' exposure to sunlight. Once we all complete the switchover from the old to the new plastic rings, therefore, the threat of suffocation that plastic rings pose to wild animals will be eliminated. Which one of the following, if true, most seriously weakens the representative's argument?
- A. The switchover to the new plastic rings will take at least two more years to complete.
  - B. After the beverage companies have switched over to the new plastic rings, a substantial number of the old plastic rings will persist in most aquatic and woodland environments.
  - C. The new plastic rings are slightly less expensive than the old rings.
  - D. The new plastic rings rarely disintegrate during shipping of beverage six-packs because most trucks that transport canned beverages protect their cargo from sunlight.
  - E. The new plastic rings disintegrate into substances that are harmful to aquatic animals when ingested in substantial quantities by them.
56. There is relatively little room for growth in the overall carpet market, which is tied to the size of the population. Most who purchase carpet do so only once or twice, first in their twenties or thirties, and then perhaps again in their fifties or sixties. Thus as the population ages, companies producing carpet will be able to gain market share in the carpet market only through purchasing competitors, and not through more aggressive marketing. Which one of the following, if true, casts the most doubt on the conclusion above?
- A. Most of the major carpet producers market other floor coverings as well.
  - B. Most established carpet producers market several different brand names and varieties, and there is no remaining niche in the market for new brands to fill.
  - C. Two of the three mergers in the industry's last ten years led to a decline in profits and revenues for the newly merged companies.
  - D. Price reductions, achieved by cost-cutting in production, by some of the dominant firms in the carpet market are causing other producers to leave the market altogether.
  - E. The carpet market is unlike most markets in that consumers are becoming increasingly resistant to new patterns and styles.

57. Speaker: Contemporary business firms need to recognize that avoiding social responsibility leads to the gradual erosion of power. This is Davis and Blomstrom's Iron Law of Responsibility: "In the long run, those who do not use power in a manner which society considers responsible will tend to lose it." The law's application to human institutions certainly stands confirmed by history. Though the "long run" may require decades or even centuries in some instances, society ultimately acts to reduce power when society thinks it is not being used responsibly. Therefore, a business that wishes to retain its power as long as it can, must act responsibly. Which one of the following statements, if true, most weakens the speaker's argument?
- A. Government institutions are as subject to the Iron Law of Responsibility as business institutions.
  - B. Public relations programs can cause society to consider an institution socially responsible even when it is not.
  - C. The power of some institutions erodes more slowly than the power of others, whether they are socially responsible or not.
  - D. Since no institution is eternal, every business will eventually fail.
  - E. Some businesses that have used power in socially responsible ways have lost it.
58. Politician: All nations that place a high tax on income produce thereby a negative incentive for technological innovation, and all nations in which technological innovation is hampered inevitably fall behind in the international arms race. Those nations that, through historical accident or the foolishness of their political leadership, wind up in a strategically disadvantageous position are destined to lose their voice in world affairs. So if a nation wants to maintain its value system and way of life, it must not allow its highest tax bracket to exceed 30 percent of income. Each of the following, if true, weakens the politician's argument EXCEPT:
- A. The top level of taxation must reach 45 percent before taxation begins to deter inventors and industrialists from introducing new technologies and industries.
  - B. Making a great deal of money is an insignificant factor in driving technological innovation.
  - C. Falling behind in the international arms race does not necessarily lead to a strategically less advantageous position.
  - D. Those nations that lose influence in the world community do not necessarily suffer from a threat to their value system or way of life.
  - E. Allowing one's country to lose its technological edge, especially as concerns weaponry, would be foolish rather than merely a historical accident.
59. Human beings have cognitive faculties that are superior to those of other animals, and once humans become aware of these, they cannot be made happy by anything that does not involve gratification of these faculties. Which one of the following statements, if true, most calls into question the view above?
- A. Certain animals—dolphins and chimpanzees, for example—appear to be capable of rational communication.
  - B. Many people familiar both with intellectual stimulation and with physical pleasures enjoy the latter more.
  - C. Someone who never experienced classical music as a child will usually prefer popular music as an adult.
  - D. Many people who are serious athletes consider themselves to be happy.
  - E. Many people who are serious athletes love gourmet food.
60. Loggerhead turtles live and breed in distinct groups, of which some are in the Pacific Ocean and some are in the Atlantic. New evidence suggests that juvenile Pacific loggerheads that feed near the Baja peninsula hatch in Japanese waters 10,000 kilometers away. Ninety-five percent of the DNA samples taken from the Baja turtles match those taken from turtles at the Japanese nesting sites. Which one of the following, if true, most seriously weakens the reasoning above?
- A. Nesting sites of loggerhead turtles have been found off the Pacific coast of North America several thousand kilometers north of the Baja peninsula.
  - B. The distance between nesting sites and feeding sites of Atlantic loggerhead turtles is less than 5,000 kilometers.
  - C. Loggerhead hatchlings in Japanese waters have been declining in number for the last decade while the number of nesting sites near the Baja peninsula has remained constant.
  - D. Ninety-five percent of the DNA samples taken from the Baja turtles match those taken from Atlantic loggerhead turtles.
  - E. Commercial aquariums have been successfully breeding Atlantic loggerheads with Pacific loggerheads for the last five years.

61. People who have specialized knowledge about a scientific or technical issue are systematically excluded from juries for trials where the issue is relevant. Thus, trial by jury is not a fair means of settling disputes involving such issues. Which one of the following, if true, most seriously weakens the argument?
- A. The more complicated the issue being litigated, the less likely it is that a juror without specialized knowledge of the field involved will be able to comprehend the testimony being given.
  - B. The more a juror knows about a particular scientific or technical issue involved in a trial, the more likely it is that the juror will be prejudiced in favor of one of the litigating parties before the trial begins.
  - C. Appointing an impartial arbitrator is not a fair means of settling disputes involving scientific or technical issues, because arbitrators tend to favor settlements in which both parties compromise on the issues.
  - D. Experts who give testimony on scientific or technical issues tend to hedge their conclusions by discussing the possibility of error.
  - E. Expert witnesses in specialized fields often command fees that are so high that many people involved in litigation cannot afford their services.
62. The five senses have traditionally been viewed as distinct yet complementary. Each sense is thought to have its own range of stimuli that are incapable of stimulating the other senses. However, recent research has discovered that some people taste a banana and claim that they are tasting blue, or see a color and say that it has a specific smell. This shows that such people, called synesthiacs, have senses that do not respect the usual boundaries between the five recognized senses. Which one of the following statements, if true, most seriously weakens the argument?
- A. Synesthiacs demonstrate a general, systematic impairment in their ability to use and understand words.
  - B. Recent evidence strongly suggests that there are other senses besides sight, touch, smell, hearing, and taste.
  - C. The particular ways in which sensory experiences overlap in synesthiacs follow a definite pattern.
  - D. The synesthetic phenomenon has been described in the legends of various cultures.
  - E. Synesthiacs can be temporarily rid of their synesthetic experiences by the use of drugs.
63. Archaeologist: A skeleton of a North American mastodon that became extinct at the peak of the Ice Age was recently discovered. It contains a human-made projectile dissimilar to any found in that part of Eurasia closest to North America. Thus, since Eurasians did not settle in North America until shortly before the peak of the Ice Age, the first Eurasian settlers in North America probably came from a more distant part of Eurasia. Which one of the following, if true, most seriously weakens the archaeologist's argument?
- A. The projectile found in the mastodon does not resemble any that were used in Eurasia before or during the Ice Age.
  - B. The people who occupied the Eurasian area closest to North America remained nomadic throughout the Ice Age.
  - C. The skeleton of a bear from the same place and time as the mastodon skeleton contains a similar projectile.
  - D. Other North American artifacts from the peak of the Ice Age are similar to ones from the same time found in more distant parts of Eurasia.
  - E. Climatic conditions in North America just before the Ice Age were more conducive to human habitation than were those in the part of Eurasia closest to North America at that time.
64. Lobsters and other crustaceans eaten by humans are more likely to contract gill diseases when sewage contaminates their water. Under a recent proposal, millions of gallons of local sewage each day would be rerouted many kilometers offshore. Although this would substantially reduce the amount of sewage in the harbor where lobsters are caught, the proposal is pointless, because hardly any lobsters live long enough to be harmed by those diseases. Which one of the following, if true, most seriously weakens the argument?
- A. Contaminants in the harbor other than sewage are equally harmful to lobsters.
  - B. Lobsters, like other crustaceans, live longer in the open ocean than in industrial harbors.
  - C. Lobsters breed as readily in sewage- contaminated water as in unpolluted water.
  - D. Gill diseases cannot be detected by examining the surface of the lobster.
  - E. Humans often become ill as a result of eating lobsters with gill diseases.



65. People with high blood pressure are generally more nervous and anxious than people who do not have high blood pressure. This fact shows that this particular combination of personality traits—the so-called hypertensive personality—is likely to cause a person with these traits to develop high blood pressure. The reasoning in the argument is most vulnerable to criticism on the grounds that the argument
- A. fails to define the term “hypertensive personality”
  - B. presupposes that people have permanent personality traits
  - C. simply restates the claim that there is a “hypertensive personality” without providing evidence to support that claim.
  - D. takes a correlation between personality traits and high blood pressure as proof that the traits cause high blood pressure.
  - E. focuses on nervousness and anxiety only, ignoring other personality traits that people with high blood pressure might have
66. High school students who feel that they are not succeeding in high school often drop out before graduating and go to work. Last year, however, the city’s high school dropout rate was significantly lower than the previous year’s rate. This is encouraging evidence that the program instituted two years ago to improve the morale of high school students has begun to take effect to reduce dropouts. Which one of the following, if true about the last year, most seriously weakens the argument?
- A. There was a recession that caused a high level of unemployment in the city.
  - B. The morale of students who dropped out of high school had been low even before they reached high school.
  - C. As in the preceding year, more high school students remained in school than dropped out.
  - D. High schools in the city established placement offices to assist their graduates in obtaining employment.
  - E. The anti-dropout program was primarily aimed at improving students’ morale in those high schools with the highest dropout rates.
67. The number of airplanes equipped with a new anti-collision device has increased steadily during the past two years. During the same period, it has become increasingly common for key information about an airplane’s altitude and speed to disappear suddenly from air traffic controllers’ screens. The new anti-collision device, which operates at the same frequency as air traffic radar, is therefore responsible for the sudden disappearance of key information. Which one of the following, if true, most seriously weakens the argument?
- A. The new anti-collision device has already prevented a considerable number of mid-air collisions.
  - B. It was not until the new anti-collision device was introduced that key information first began disappearing suddenly from controllers’ screens.
  - C. The new anti-collision device is scheduled to be moved to a different frequency within the next two to three months.
  - D. Key information began disappearing from controllers’ screens three months before the new anti-collision device was first tested.
  - E. The sudden disappearance of key information from controllers’ screens has occurred only at relatively large airports.
68. Violent crime in this town is becoming a serious problem. Compared to last year, local law enforcement agencies have responded to 17 percent more calls involving violent crimes, showing that the average citizen of this town is more likely than ever to become a victim of a violent crime. Which one of the following, if true, most seriously weakens the argument?
- A. The town’s overall crime rate appears to have risen slightly this year compared to the same period last year.
  - B. In general, persons under the age of 65 are less likely to be victims of violent crimes than persons over the age of 65.
  - C. As a result of the town’s community outreach programs, more people than ever are willing to report violent crimes to the proper authorities.
  - D. In response to worries about violent crime, the town has recently opened a community center providing supervised activities for teenagers.
  - E. Community officials have shown that a relatively small number of repeat offenders commit the majority of violent crimes in the town.

69. Medical researcher: As expected, records covering the last four years of ten major hospitals indicate that babies born prematurely were more likely to have low birth weights and to suffer from health problems than were babies not born prematurely. These records also indicate that mothers who had received adequate prenatal care were less likely to have low birth weight babies than were mothers who had received inadequate prenatal care. Adequate prenatal care, therefore, significantly decreases the risk of low birth weight babies. Which one of the following, if true, most weakens the medical researcher's argument?
- A. The hospital records indicate that many babies that are born with normal birth weights are born to mothers who had inadequate prenatal care.
  - B. Mothers giving birth prematurely are routinely classified by hospitals as having received inadequate prenatal care when the record of that care is not available.
  - C. The hospital records indicate that low birth weight babies were routinely classified as having been born prematurely.
  - D. Some babies not born prematurely, whose mothers received adequate prenatal care, have low birth weights.
  - E. Women who receive adequate prenatal care are less likely to give birth prematurely than are women who do not receive adequate prenatal care.
70. Researcher: People with certain personality disorders have more theta brain waves than those without such disorders. But my data show that the amount of one's theta brain waves increases while watching TV. So watching too much TV increases one's risk of developing personality disorders. A questionable aspect of the reasoning above is that it
- A. uses the phrase "personality disorders" ambiguously
  - B. fails to define the phrase "theta brain waves"
  - C. takes a correlation to imply a causal connection
  - D. draws a conclusion from an unrepresentative sample of data
  - E. infers that watching TV is a consequence of a personality disorder
71. Unlike newspapers in the old days, today's newspapers and televised news programs are full of stories about murders and assaults in our city. One can only conclude from this change that violent crime is now out of control, and, to be safe from personal attack, one should not leave one's home except for absolute necessities. Which one of the following, if true, would cast the most serious doubt on the conclusion?
- A. Newspapers and televised news programs have more comprehensive coverage of violent crime than newspapers did in the old days.
  - B. National data show that violent crime is out of control everywhere, not just in the author's city.
  - C. Police records show that people experience more violent crimes in their own neighborhoods than they do outside their neighborhoods.
  - D. Murder comprised a larger proportion of violent crimes in the old days than it does today.
  - E. News magazines play a more important role today in informing the public about crime than they did in the old days.
72. Waste management companies, which collect waste for disposal in landfills and incineration plants, report that disposable plastics make up an ever-increasing percentage of the waste they handle. It is clear that attempts to decrease the amount of plastic that people throw away in the garbage are failing. Which one of the following, if true, most seriously weakens the argument?
- A. Because plastics create harmful pollutants when burned, an increasing percentage of the plastics handled by waste management companies are being disposed of in landfills.
  - B. Although many plastics are recyclable, most of the plastics disposed of by waste management companies are not.
  - C. People are more likely to save and reuse plastic containers than containers made of heavier materials like glass or metal.
  - D. An increasing proportion of the paper, glass, and metal cans that waste management companies used to handle is now being recycled.
  - E. While the percentage of products using plastic packaging is increasing, the total amount of plastic being manufactured has remained unchanged.

73. Rumored declines in automobile-industry revenues are exaggerated. It is true that automobile manufacturers' share of the industry's revenues fell from 65 percent two years ago to 50 percent today, but over the same period suppliers of automobile parts had their share increase from 15 percent to 20 percent and service companies (for example, distributors, dealers, and repairers) had their share increase from 20 percent to 30 percent. Which one of the following best indicates why the statistics given above provide by themselves no evidence for the conclusion they are intended to support?
- The possibility is left open that the statistics for manufacturers' share of revenues come from a different source than the other statistics.
  - No matter what changes the automobile industry's overall revenues undergo, the total of all shares of these revenues must be 100 percent.
  - No explanation is given for why the revenue shares of different sectors of the industry changed.
  - Manufacturers and parts companies depend for their revenue on dealers' success in selling cars.
  - Revenues are an important factor but are not the only factor in determining profits.
74. Politician: Those economists who claim that consumer price increases have averaged less than 3 percent over the last year are mistaken. They clearly have not shopped anywhere recently. Gasoline is up 10 percent over the last year; my auto insurance, 12 percent; newspapers, 15 percent; propane, 13%; bread, 50 percent. The reasoning in the politician's argument is most vulnerable to criticism on the grounds that the argument
- impugns the character of the economists rather than addressing their arguments
  - fails to show that the economists mentioned are not experts in the area of consumer prices
  - mistakenly infers that something is not true from the claim that it has not been shown to be so
  - uses evidence drawn from a small sample that may well be unrepresentative
  - attempts to persuade by making an emotional appeal
75. Editorial: The premier's economic advisor assures her that with the elimination of wasteful spending the goal of reducing taxes while not significantly decreasing government services can be met. But the premier should not listen to this advisor, who in his youth was convicted of embezzlement. Surely his economic advice is as untrustworthy as he is himself, and so the premier should discard any hope of reducing taxes without a significant decrease in government services. Which one of the following is a questionable argumentative strategy employed in the editorial's argument?
- rejecting a proposal on the grounds that a particular implementation of the proposal is likely to fail
  - trying to win support for a proposal by playing on people's fears of what could happen otherwise
  - criticizing the source of a claim rather than examining the claim itself
  - taking a lack of evidence for a claim as evidence undermining the claim
  - presupposing what it sets out to establish
76. Cotrell is, at best, able to write magazine articles of average quality. The most compelling pieces of evidence for this are those few of the numerous articles submitted by Cotrell that are superior, since Cotrell, who is incapable of writing an article that is better than average, must obviously have plagiarized superior ones. The argument is most vulnerable to criticism on which one of the following grounds?
- It simply ignores the existence of potential counterevidence.
  - It generalizes from atypical occurrences.
  - It presupposes what it seeks to establish.
  - It relies on the judgment of experts in a matter to which their expertise is irrelevant.
  - It infers limits on ability from a few isolated lapses in performance.
77. Activist: Food producers irradiate food in order to prolong its shelf life. Five animal studies were recently conducted to investigate whether this process alters food in a way that could be dangerous to people who eat it. The studies concluded that irradiated food is safe for humans to eat. However, because these studies were subsequently found by a panel of independent scientists to be seriously flawed in their methodology, it follows that irradiated food is not safe for human consumption. The reasoning in the activist's argument is flawed because that argument
- treats a failure to prove a claim as constituting proof of the denial of that claim
  - treats methodological flaws in past studies as proof that it is currently not possible to devise methodologically adequate alternatives
  - fails to consider the possibility that even a study whose methodology has no serious flaws nonetheless might provide only weak support for its conclusion
  - fails to consider the possibility that what is safe for animals might not always be safe for human beings
  - fails to establish that the independent scientists know more about food irradiation than do the people who produced the five studies

78. Philosopher: Scientists talk about the pursuit of truth, but, like most people, they are self-interested. Accordingly, the professional activities of most scientists are directed toward personal career enhancement, and only incidentally toward the pursuit of truth. Hence, the activities of the scientific community are largely directed toward enhancing the status of that community as a whole, and only incidentally toward the pursuit of truth. The reasoning in the philosopher's argument is flawed because the argument
- A. improperly infers that each and every scientist has a certain characteristic from the premise that most scientists have that characteristic
  - B. improperly draws an inference about the scientific community as a whole from a premise about individual scientists
  - C. presumes, without giving justification, that the aim of personal career enhancement never advances the pursuit of truth
  - D. illicitly takes advantage of an ambiguity in the meaning of "self-interested"
  - E. improperly draws an inference about a cause from premises about its effects
79. Several legislators claim that the public finds many current movies so violent as to be morally offensive. However, these legislators have misrepresented public opinion. In a survey conducted by a movie industry guild, only 17 percent of respondents thought that movies are overly violent, and only 3 percent found any recent movie morally offensive. These low percentages are telling, because the respondents see far more current movies than does the average moviegoer. The reasoning in the argument is flawed in that the argument
- A. attempts to undermine the legislators' credibility instead of addressing their argument
  - B. bases its conclusion on subjective judgments rather than on an objective criterion of moral offensiveness
  - C. fails to consider the possibility that violent movies increase the prevalence of antisocial behavior
  - D. generalizes from a sample that is unlikely to be representative of public sentiment
  - E. presumes, without providing justification, that the people surveyed based their responses on a random sampling of movies
80. On some hot days the smog in Hillview reaches unsafe levels, and on some hot days the wind blows into Hillview from the east. Therefore, on some days when the wind blows into Hillview from the east, the smog in Hillview reaches unsafe levels. The reasoning in the argument is flawed in that the argument
- A. mistakes a condition that sometimes accompanies unsafe levels of smog for a condition that necessarily accompanies unsafe levels of smog
  - B. fails to recognize that one set might have some members in common with each of two others even though those two other sets have no members in common with each other
  - C. uses the key term "unsafe" in one sense in a premise and in another sense in the conclusion
  - D. contains a premise that is implausible unless the conclusion is presumed to be true
  - E. infers a particular causal relation from a correlation that could be explained in a variety of other ways
81. Astronomer: I have asserted that our solar system does not contain enough meteoroids and other cosmic debris to have caused the extensive cratering on the far side of the moon. My opponents have repeatedly failed to demonstrate the falsity of this thesis. Their evidence is simply inconclusive; thus they should admit that my thesis is correct. The reasoning in the astronomer's argument is flawed because this argument
- A. criticizes the astronomer's opponents rather than their arguments
  - B. infers the truth of the astronomer's thesis from the mere claim that it has not been proven false
  - C. ignores the possibility that alternative explanations may exist for the cratering
  - D. presumes that the astronomer's thesis should not be subject to rational discussion and criticism
  - E. fails to precisely define the key word "meteoroids"
82. Some people believe that good health is due to luck. However, studies from many countries indicate a strong correlation between good health and high educational levels. Thus research supports the view that good health is largely the result of making informed lifestyle choices. The reasoning in the argument is most vulnerable to criticism on the grounds that the argument
- A. presumes, without providing justification that only highly educated people make informed lifestyle choices
  - B. overlooks the possibility that people who make informed lifestyle choices may nonetheless suffer from inherited diseases
  - C. presumes, without providing justification, that informed lifestyle choices are available to everyone
  - D. overlooks the possibility that the same thing may causally contribute both to education and to good health
  - E. does not acknowledge that some people who fail to make informed lifestyle choices are in good health

83. Advertisement: At most jewelry stores, the person assessing the diamond is the person selling it so you can see why an assessor might say that a diamond is of higher quality than it really is. But because all diamonds sold at Gem World are certified in writing, you're assured of a fair price when purchasing a diamond from Gem World. The reasoning in the advertisement would be most strengthened if which one of the following were true?
- A. Many jewelry stores other than Gem World also provide written certification of the quality of their diamonds.
  - B. The certifications of diamonds at Gem World are written by people with years of experience in appraising gems.
  - C. The diamonds sold at Gem World are generally of higher quality than those sold at other jewelry stores.
  - D. The diamond market is so volatile that prices of the most expensive diamonds can change by hundreds of dollars from one day to the next.
  - E. The written certifications of diamonds at Gem World are provided by an independent company of gem specialists.
84. Statistician: A financial magazine claimed that its survey of its subscribers showed that North Americans are more concerned about their personal finances than about politics. One question was: "Which do you think about more: politics or the joy of earning money?" This question is clearly biased. Also, the readers of the magazine are a self-selecting sample. Thus, there is reason to be skeptical about the conclusion drawn in the magazine's survey. Each of the following, if true, would strengthen the statistician's argument EXCEPT:
- A. The credibility of the magazine has been called into question on a number of occasions.
  - B. The conclusions drawn in most magazine surveys have eventually been disproved.
  - C. Other surveys suggest that North Americans are just as concerned about politics as they are about finances.
  - D. There is reason to be skeptical about the results of surveys that are biased and unrepresentative.
  - E. Other surveys suggest that North Americans are concerned not only with politics and finances, but also with social issues.
85. Modern navigation systems, which are found in most of today's commercial aircraft, are made with low-power circuitry, which is more susceptible to interference than the vacuum-tube circuitry found in older planes. During landing, navigation systems receive radio signals from the airport to guide the plane to the runway. Recently, one plane with low-power circuitry veered off course during landing, its dials dimming, when a passenger turned on a laptop computer. Clearly, modern aircraft navigation systems are being put at risk by the electronic devices that passengers carry on board, such as cassette players and laptop computers. Which one of the following, if true, LEAST strengthens the argument above?
- A. After the laptop computer was turned off, the plane regained course and its navigation instruments and dials returned to normal.
  - B. When in use all electronic devices emit electromagnetic radiation, which is known to interfere with circuitry.
  - C. No problems with navigational equipment or instrument dials have been reported on flights with no passenger-owned electronic devices on board.
  - D. Significant electromagnetic radiation from portable electronic devices can travel up to eight meters, and some passenger seats on modern aircraft are located within four meters of the navigation systems.
  - E. Planes were first equipped with low-power circuitry at about the same time portable electronic devices became popular.
86. Amphibian populations are declining in numbers worldwide. Not coincidentally, the earth's ozone layer has been continuously depleted throughout the last 50 years. Atmospheric ozone blocks UV-B, a type of ultraviolet radiation that is continuously produced by the sun, and which can damage genes. Because amphibians lack hair, hide, or feathers to shield them, they are particularly vulnerable to UV-B radiation. In addition, their gelatinous eggs lack the protection of leathery or hard shells. Thus, the primary cause of the declining amphibian population is the depletion of the ozone layer. Each of the following, if true, would strengthen the argument EXCEPT:
- A. Of the various types of radiation blocked by atmospheric ozone, UV-B is the only type that can damage genes.
  - B. Amphibian populations are declining far more rapidly than are the populations of non-amphibian species whose tissues and eggs have more natural protection from UV-B.
  - C. Atmospheric ozone has been significantly depleted above all the areas of the world in which amphibian populations are declining.
  - D. The natural habitat of amphibians has not become smaller over the past century.
  - E. Amphibian populations have declined continuously for the last 50 years.

87. According to the theory of continental drift, in prehistoric times, many of today's separate continents were part of a single huge landmass. As the plates on which this landmass rested began to move, the mass broke apart, and ocean water filled the newly created chasms. It is hypothesized, for example, that South America was once joined on its east coast with what is now the west coast of Africa. Which one of the following discoveries, if it were made, would most support the above hypothesis about South America and Africa?
- A. A large band of ancient rock of a rare type along the east coast of South America is of the same type as a band on the west coast of Africa.
  - B. Many people today living in Brazil are genetically quite similar to many western Africans.
  - C. The climates of western Africa and of the east coast of South America resemble each other.
  - D. Some of the oldest tribes of people living in eastern South America speak languages linguistically similar to various languages spoken by certain western African peoples.
  - E. Several species of plants found in western Africa closely resemble plants growing in South America.
88. Medical doctor: Sleep deprivation is the cause of many social ills, ranging from irritability to potentially dangerous instances of impaired decision making. Most people today suffer from sleep deprivation to some degree. Therefore we should restructure the workday to allow people flexibility in scheduling their work hours. Which one of the following, if true, would most strengthen the medical doctor's argument?
- A. The primary cause of sleep deprivation is overwork.
  - B. Employees would get more sleep if they had greater latitude in scheduling their work hours.
  - C. Individuals vary widely in the amount of sleep they require.
  - D. More people would suffer from sleep deprivation today than did in the past if the average number of hours worked per week had not decreased.
  - E. The extent of one's sleep deprivation is proportional to the length of one's workday.
89. Toxicologist: A survey of oil-refinery workers who work with MBTE, an ingredient currently used in some smog-reducing gasolines, found an alarming incidence of complaints about headaches, fatigue, and shortness of breath. Since gasoline containing MBTE will soon be widely used, we can expect an increased incidence of headaches, fatigue, and shortness of breath. Each of the following, if true, strengthens the toxicologist's argument EXCEPT:
- A. Most oil-refinery workers who do not work with MBTE do not have serious health problems involving headaches, fatigue, and shortness of breath.
  - B. Headaches, fatigue, and shortness of breath are among the symptoms of several medical conditions that are potentially serious threats to public health.
  - C. Since the time when gasoline containing MBTE was first introduced in a few metropolitan areas, those areas reported an increase in the number of complaints about headaches, fatigue, and shortness of breath.
  - D. Regions in which only gasoline containing MBTE is used have a much greater incidence of headaches, fatigue, and shortness of breath than do similar regions in which only MBTE-free gasoline is used.
  - E. The oil-refinery workers surveyed were carefully selected to be representative of the broader population in their medical histories prior to exposure to MBTE, as well as in other relevant respects.
90. Galanin is a protein found in the brain. In an experiment, rats that consistently chose to eat fatty foods when offered a choice between lean and fatty foods were found to have significantly higher concentrations of galanin in their brains than did rats that consistently chose lean over fatty foods. These facts strongly support the conclusion that galanin causes rats to crave fatty foods. Which one of the following, if true, most supports the argument?
- A. The craving for fatty foods does not invariably result in a rat's choosing those foods over lean foods.
  - B. The brains of the rats that consistently chose to eat fatty foods did not contain significantly more fat than did the brains of rats that consistently chose lean foods.
  - C. The chemical components of galanin are present in both fatty foods and lean foods.
  - D. The rats that preferred fatty foods had the higher concentrations of galanin in their brains before they were offered fatty foods.
  - E. Rats that metabolize fat less efficiently than do other rats develop high concentrations of galanin in their brains.

91. For next year, the Chefs' Union has requested a 10 percent salary increase for each of its members, whereas the Hotel Managers' Union has requested only an 8 percent salary increase for each of its members. These facts demonstrate that the average dollar amount of the raises that the Chefs' Union has requested for next year is greater than that of the raises requested by the Hotel Managers' Union. Which one of the following, if true, most strengthens the argument?
- A. The Chefs' Union has many more members than does the Hotel Managers' Union.
  - B. The Chefs' Union is a more powerful union than is the Hotel Managers' Union and is therefore more likely to obtain the salary increases it requests.
  - C. The current salaries of the members of the Chefs' Union are, on average, higher than the current salaries of the members of the Hotel Managers' Union.
  - D. The average dollar amount of the raises that the members of the Chefs' Union received last year was equal to the average dollar amount of the raises that the members of the Hotel Managers' Union received.
  - E. The members of the Chefs' Union received salary increases of 10 percent in each of the last two years, while the members of the Hotel Managers' Union received salary increases of only 8 percent in each of the last two years.
92. Advertisement: Most power hedge trimmers on the market do an adequate job of trimming hedges, but many power hedge trimmers are dangerous to operate and can cause serious injury when used by untrained operators. Bolter Industries' hedge trimmer has been tested by National Laboratories, the most trusted name in safety testing. So you know, if you buy a Bolter's, you are buying a power hedge trimmer whose safety is assured. The answer to which one of the following questions would be most useful in evaluating the truth of the conclusion drawn in the advertisement?
- A. Has National Laboratories performed safety tests on other machines made by Bolter Industries?
  - B. How important to the average buyer of a power hedge trimmer is safety of operation?
  - C. What were the results of National Laboratories' tests of Bolter Industries' hedge trimmer?
  - D. Are there safer ways of trimming a hedge than using a power hedge trimmer?
  - E. Does any other power hedge trimmer on the market do a better job of trimming hedges than does Bolter Industries' hedge trimmer?
93. Columnist: George Orwell's book 1984 has exercised much influence on a great number of this newspaper's readers. One thousand readers were surveyed and asked to name the one book that had the most influence on their lives. The book chosen most often was the Bible; 1984 was second. The answer to which one of the following questions would most help in evaluating the columnist's argument?
- A. How many books had each person surveyed read?
  - B. How many people chose books other than 1984?
  - C. How many people read the columnist's newspaper?
  - D. How many books by George Orwell other than 1984 were chosen?
  - E. How many of those surveyed had actually read the books they chose?
94. Anders: The physical structure of the brain plays an important role in thinking. So researchers developing "thinking machines"—computers that can make decisions based on both common sense and factual knowledge—should closely model those machines on the structure of the brain.  
 Yang: Important does not mean essential. After all, no flying machine closely modeled on birds has worked; workable aircraft are structurally very different from birds. So thinking machines closely modeled on the brain are also likely to fail. In developing a workable thinking machine, researchers would therefore increase their chances of success if they focus on the brain's function and simply ignore its physical structure. In evaluating Yang's argument it would be most helpful to know whether
- A. studies of the physical structure of birds provided information crucial to the development of workable aircraft
  - B. researchers currently working on thinking machines take all thinking to involve both common sense and factual knowledge
  - C. as much time has been spent trying to develop a workable thinking machine as had been spent in developing the first workable aircraft
  - D. researchers who specialize in the structure of the brain are among those who are trying to develop thinking machines
  - E. some flying machines that were not closely modeled on birds failed to work

95. Provinces and states with stringent car safety requirements, including required use of seat belts and annual safety inspections, have on average higher rates of accidents per kilometer driven than do provinces and states with less stringent requirements. Nevertheless, most highway safety experts agree that more stringent requirements do reduce accident rates. Which one of the following, if true, most helps to reconcile the safety experts' belief with the apparently contrary evidence described above?
- A. Annual safety inspections ensure that car tires are replaced before they grow old.
  - B. Drivers often become overconfident after their cars have passed a thorough safety inspection.
  - C. The roads in provinces and states with stringent car safety programs are far more congested and therefore dangerous than in other provinces and states.
  - D. Psychological studies show that drivers who regularly wear seat belts often come to think of themselves as serious drivers, which for a few people discourages reckless driving.
  - E. Provinces and states with stringent car safety requirements have, on average, many more kilometers of roads than do other provinces and states.
96. Calories consumed in excess of those with which the body needs to be provided to maintain its weight are normally stored as fat and the body gains weight. Alcoholic beverages are laden with calories. However, those people who regularly drink two or three alcoholic beverages a day and thereby exceed the caloric intake necessary to maintain their weight do not in general gain weight. Which one of the following, if true, most helps to resolve the apparent discrepancy?
- A. Some people who regularly drink two or three alcoholic beverages a day avoid exceeding the caloric intake necessary to maintain their weight by decreasing caloric intake from other sources.
  - B. Excess calories consumed by people who regularly drink two or three alcoholic beverages a day tend to be dissipated as heat.
  - C. Some people who do not drink alcoholic beverages but who eat high-calorie foods do not gain weight.
  - D. Many people who regularly drink more than three alcoholic beverages a day do not gain weight.
  - E. Some people who take in fewer calories than are normally necessary to maintain their weight do not lose weight.
97. Industry experts expect improvements in job safety training to lead to safer work environments. A recent survey indicated, however, that for manufacturers who improved job safety training during the 1980s, the number of on-the-job accidents tended to increase in the months immediately following the changes in the training programs. Which one of the following, if true, most helps to resolve the apparent discrepancy in the passage above?
- A. A similar survey found that the number of on-the-job accidents remained constant after job safety training in the transportation sector was improved.
  - B. Manufacturers tend to improve their job safety training only when they are increasing the size of their workforce.
  - C. Manufacturers tend to improve job safety training only after they have noticed that the number of on-the-job accidents has increased.
  - D. It is likely that the increase in the number of on-the-job accidents experienced by many companies was not merely a random fluctuation.
  - E. Significant safety measures, such as protective equipment and government safety inspections, were in place well before the improvements in job safety training.
98. Cigarette companies claim that manufacturing both low- and high-nicotine cigarettes allows smokers to choose how much nicotine they want. However, a recent study has shown that the levels of nicotine found in the blood of smokers who smoke one pack of cigarettes per day are identical at the end of a day's worth of smoking, whatever the level of nicotine in the cigarettes they smoke. Which one of the following, if true, most helps to explain the finding of the nicotine study?
- A. Blood cannot absorb more nicotine per day than that found in the smoke from a package of the lowest-nicotine cigarettes available.
  - B. Smokers of the lowest-nicotine cigarettes available generally smoke more cigarettes per day than smokers of high-nicotine cigarettes.
  - C. Most nicotine is absorbed into the blood of a smoker even if it is delivered in smaller quantities.
  - D. The level of tar in cigarettes is higher in low-nicotine cigarettes than it is in some high-nicotine cigarettes.
  - E. When taking in nicotine by smoking cigarettes is discontinued, the level of nicotine in the blood decreases steadily.



99. Raisins are made by drying grapes in the sun. Although some of the sugar in the grapes is caramelized in the process, nothing is added. Moreover, the only thing removed from the grapes is the water that evaporates during the drying, and water contains no calories or nutrients. The fact that raisins contain more iron per calorie than grapes do is thus puzzling. Which one of the following, if true, most helps to explain why raisins contain more iron per calorie than do grapes?
- A. Since grapes are bigger than raisins, it takes several bunches of grapes to provide the same amount of iron as a handful of raisins does.
  - B. Caramelized sugar cannot be digested, so its calories do not count toward the calorie content of raisins.
  - C. The body can absorb iron and other nutrients more quickly from grapes than from raisins because of the relatively high water content of grapes.
  - D. Raisins, but not grapes, are available year- round, so many people get a greater share of their yearly iron intake from raisins than from grapes.
  - E. Raisins are often eaten in combination with other iron-containing foods, while grapes are usually eaten by themselves.
100. Vervet monkeys use different alarm calls to warn each other of nearby predators, depending on whether the danger comes from land or from the air. Which one of the following, if true, contributes most to an explanation of the behavior of vervet monkeys described above?
- A. By varying the pitch of its alarm call, a vervet monkey can indicate the number of predators approaching.
  - B. Different land-based predators are responsible for different numbers of vervet monkey deaths.
  - C. No predators that pose a danger to vervet monkeys can attack both from land and from the air.
  - D. Vervet monkeys avoid land-based predators by climbing trees but avoid predation from the air by diving into foliage.
  - E. Certain land-based predators feed only on vervet monkeys, whereas every predator that attacks vervet monkeys from the air feeds on many different animals.



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