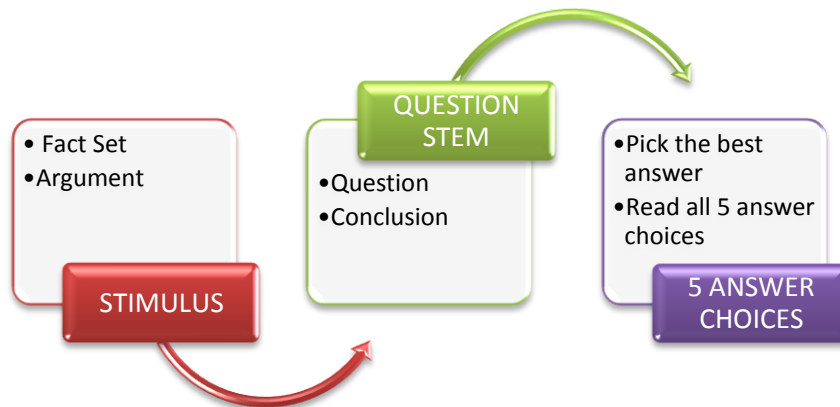
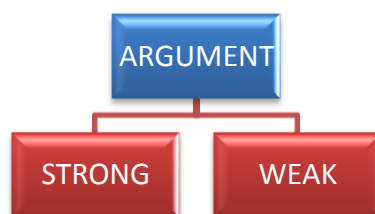
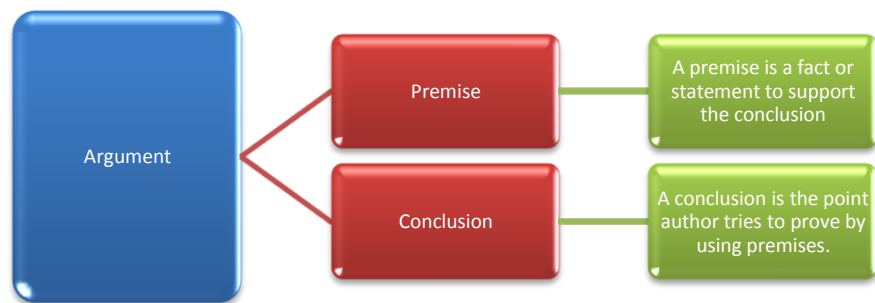


# CRITICAL REASONING

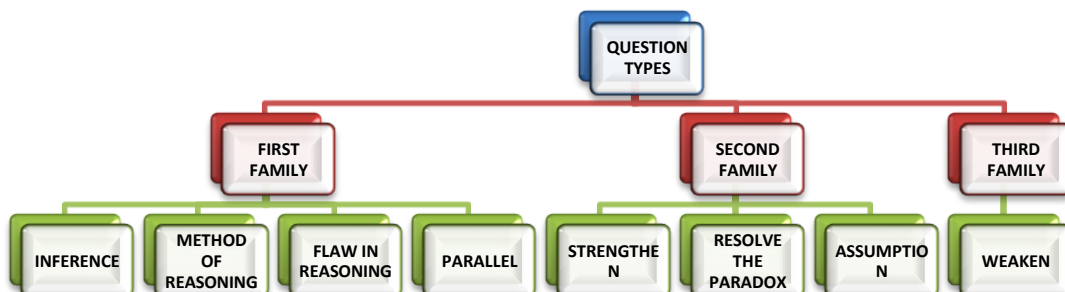
**CR contains 3 elements:**



**What is an argument?**



**Question Types:**



## FIRST FAMILY

- NO NEW INFORMATION REQUIRED
- STIMULUS IS TAKEN AS TRUE AND ANSWER CHOICES ARE SUSPECTED

## SECOND FAMILY

- NEW INFORMATION IS REQUIRED
- STIMULUS IS SUSPECTED, ANSWER CHOICES ARE TAKEN AS TRUE.

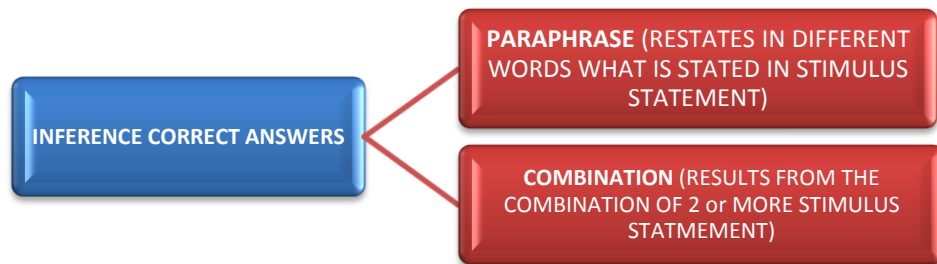
## THIRD FAMILY

- NEW INFORMATION IS REQUIRED
- STIMULUS IS SUSPECTED, ANSWER CHOICES ARE TAKEN AS TRUE.

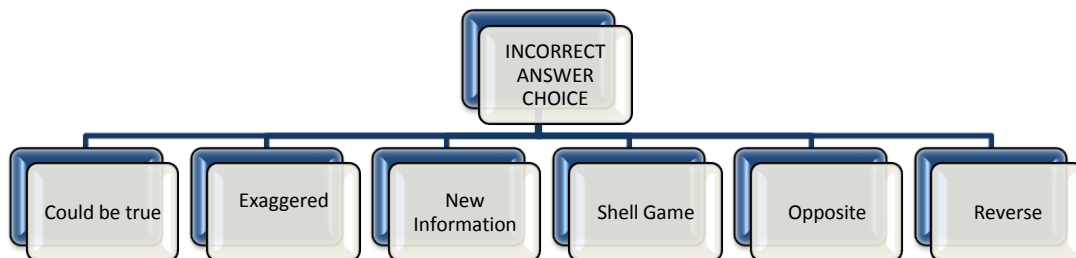
### Process to Answer CR Questions:



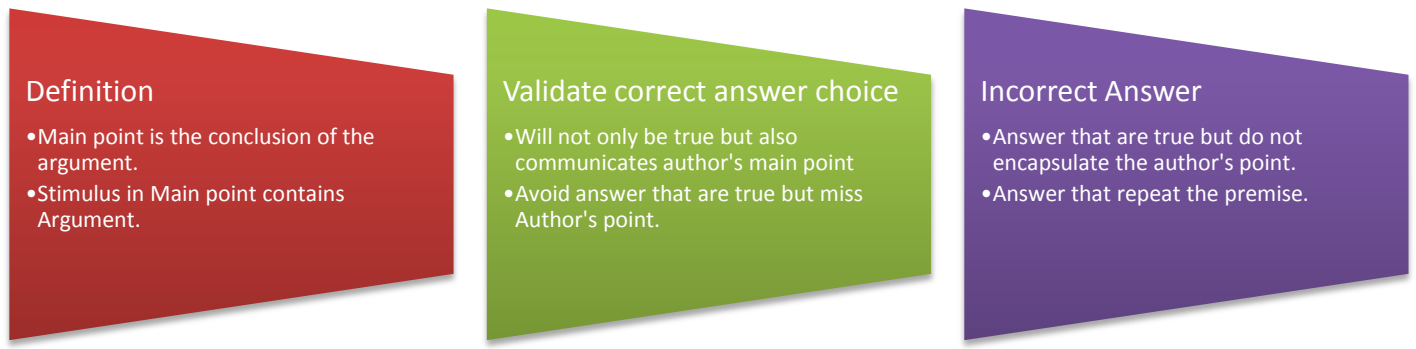
## INFERENCE (MUST BE TRUE)



## INCORRECT ANSWERS:



## MAIN POINT:



| <u>Modifier</u> | <u>Number E</u> |
|-----------------|-----------------|
| ALL             | 100             |
| Some            | 1-100           |
| Some are not    | 0-99            |
| Most            | 51-100          |
| Most are not    | 0-49            |
| None            | 0               |

|             | <u>NONE</u> | <u>SOME</u> | <u>Most</u> | <u>ALL</u> |
|-------------|-------------|-------------|-------------|------------|
| <u>NONE</u> | Never       | Always      | Always      | Always     |
| <u>SOME</u> | Always      | Never       | Never       | Sometimes  |
| <u>MOST</u> | Always      | Never       | Sometimes   | Sometimes  |
| <u>ALL</u>  | Always      | Sometimes   | Sometimes   | Always     |

The only  
with two Mosts that  
an inference is A  
-----> most C. The  
some C.

relationship  
will produce  
most<----- B--  
inference is A

## FORMAL LOGIC

The premises prove the conclusion or in other words Conclusion is deducible from the premises. Formal Logic uses Deductive reasoning.

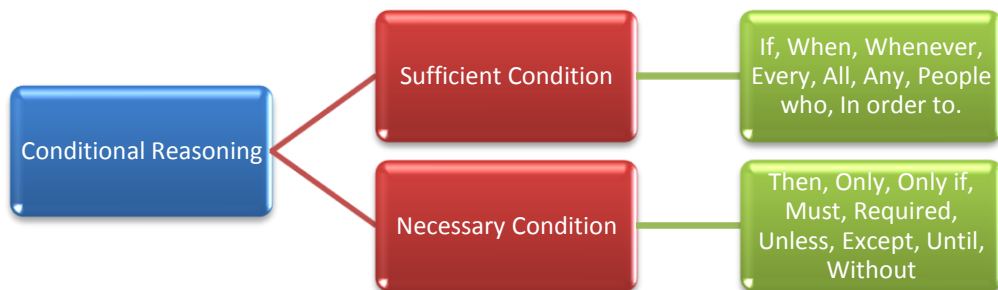
### Inductive

- makes conclusion from Specific to general.
- if premises are true, Conclusion can be false.
- e.g. Most men are thinker. Ram is a man. So, Ram is a thinker.

### Deductive

- makes the conclusion from general to specific.
- If premises are true, Conclusions will be true.
- e.g. All men are thinker. Ram is a man. So, Ram is a thinker.

## CONDITIONAL REASONING



IF sufficient condition occurs then Necessary condition must occur. If necessary condition occurs then sufficient condition may or may not occur.

### Valid Inference

- If Sufficient condition occurs then Necessary condition definitely occurs
- $S \rightarrow N$

### Contrapositive

- Negated necessary condition means negative sufficient condition. A reverse inference of Valid Inference.
- $\neg N \rightarrow \neg S$

### Mistaken Reversal

- An Invalid inference. An invalid answer choice will make Necessary condition implying sufficient condition.
- $N \rightarrow S$

### Mistaken Negation

- Another invalid inference. An invalid answer choice will make Negated Sufficient condition implying Negated Necessary condition.
- $\neg S \rightarrow \neg N$

## USE OF UNTIL, UNLESS

The statement before the until & unless is sufficient condition (when negated) and the statement after the unless & until is a necessary condition.

## WEAKEN

It must make the conclusion less believable either by shattering the conclusion or by creating enough doubt.

### What does weaken question contain:

- ✚ It contains an argument.
- ✚ The information in the stimulus is suspect.
- ✚ Weaken questions often yield strong prephrases.
- ✚ The answer choice often provides new information.
- ✚ All correct answer choice impact the conclusion.

### What to attack:

- ✚ **Attack the conclusion of the argument.** The correct answer will undermine the conclusion by showing that conclusion fails to account for some elements or possibilities. Often, the correct answer shows that conclusion does not necessarily follow from the premises.
- ✚ **In case of Conditional Argument:** Attack necessary condition by showing that necessary condition does not need to occur in order for the sufficient condition to occur.

### Scenarios to recognize and attack:

#### Incomplete information

- The author fails to consider all possibilities.
- The author relies upon incomplete evidence.

#### Improper Comparison

- The author attempts to compare 2 or more items that are essentially different.

#### Qualified conclusion

- The author limits the conclusion in such a way as to leave the argument open to attack.

### Incorrect answer choice:

#### OPPOSITE

- The answer actually strengthens the conclusion instead of weakening it.

#### SHELL GAME/ ISWAT

- It presents correct answer but changes it slightly to make it incorrect. For e.g. by using modifier words.

#### OFS

- The answer choice simply misses the point of argument and raises issues that are not related to the argument.

## **CAUSAL ARGUMENT**

- ✚ When one event occurs before the other.
- ✚ Two or more events occur simultaneously.

### **Causality in Premise**

- The flaw is due to some other reasons rather than causality
- Very few problems will have it. Take the causality as true.

### **Causality in Conclusion**

- Causality in conclusion is most often flawed.
- There are alternate explanation for the stated relationship.

## **When Author concludes that one occurrence caused another:**

- ✚ The author assumes that the stated cause is the only possible cause of the effect. (No other causes can create the effect).
- ✚ The author assumes that the stated cause will always produce the effect.

## **5 ways to weaken Causal Argument:**

Find an alternate cause of the effect.

Show that effect occurs but cause do not.

Show that the cause occurs but effect do not.

Show that the stated relationship is actually reversed.

Show statistical problem exists with data used to make casual statement.

## **STRENGTHEN**

### **What does Strengthen question contain:**

- ✚ It contains an argument.
- ✚ The information in the stimulus is suspect.
- ✚ Strengthen questions often yield strong prephrases.
- ✚ The answer choices often provide new information.
- ✚ All correct answer choice impact the conclusion.

### **How to attack Strengthen problem:**

- ✚ Identify the conclusion.
- ✚ Look for weakness in the argument and then look for answer that eliminates that weakness.  
Close any gap or hole in the argument.
- ✚ An assumption also works as a strengthener.
- ✚ In case of surveys or data, try and validate the data or soundness of surveys.
- ✚ A correct answer will strengthen the conclusion by a little (1%) or a lot (100%).

### **Incorrect answer choice:**

| OPPOSITE                                                                 | SHELL GAME/ ISWAT                                                                                          | OFS                                                                                                        |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| •The answer actually weakens the conclusion instead of strengthening it. | •It present correct answer but changes it slightly to make it incorrect. For e.g. by using modifier words. | •The answer choice simply miss the point of argument and raise issue that are not related to the argument. |

### **5 ways to strengthen Causal argument:**

Eliminate any alternate causes of the effect.

Show that when cause occurs, the effect occurs.

Show that the cause do not occurs, the effect does not occur.

Show statistical data is accurate and eliminate any possible problems with data.

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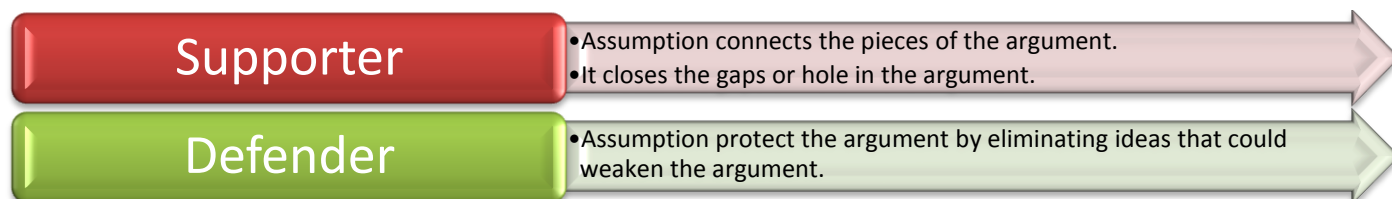
## **ASSUMPTION**

An unstated premise on which the premise and the conclusion rest upon.

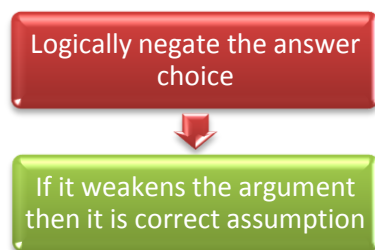
### **Feature of Assumption:**

- ✚ It does not contain extraneous information.
- ✚ It is a necessary part of the argument.

### **Role played by Assumption**



### **Negation Test**



### **How to Negate**

| <b><u>Quantity/ Time</u></b> | <b><u>Logical opposite</u></b>      |
|------------------------------|-------------------------------------|
| ALL                          | Not all                             |
| Some (At least one)          | None                                |
| Everywhere                   | Not everywhere                      |
| Somewhere                    | Nowhere                             |
| Will                         | Might not                           |
| Could                        | Cannot                              |
| Conditional Statement        | Negate only the necessary condition |



## **Assumption & Conditionality**

- ✚ If conditional statements are linked together in the argument, the correct answer choice for an Assumption question will typically supply a missing link.
- ✚ If no conditional chains are present and only a conditional conclusion exists, the correct answer will usually deny scenarios where sufficient occurs and the necessary does not or the correct answer will confirm that the necessary condition is necessary for sufficient to occur.

## **Assumption & Causality**

Uses the same strengthening technique :

Eliminate any alternate causes of the effect.

Show that when cause occurs, the effect occurs.

Show that the cause does not occur, the effect does not occur.

Eliminate the possibility that stated relationship is reversed.

Show statistical data is accurate and eliminate any possible problems with data.

## **3 Quirks in Assumption Answer choices:**

Answer starting with the phrase "at least one" or "at least some" are often correct.

Avoid answer that claim an idea as the most important consideration for the author.

Watch out for the use of "not" or negatives in assumption answer choices.

## **Mechanically solving Justify the conclusion:**

Any new element in the conclusion will appear in the answer choice.

Elements common to the conclusion and at least one premise or to two premises will not appear in the answer choice.

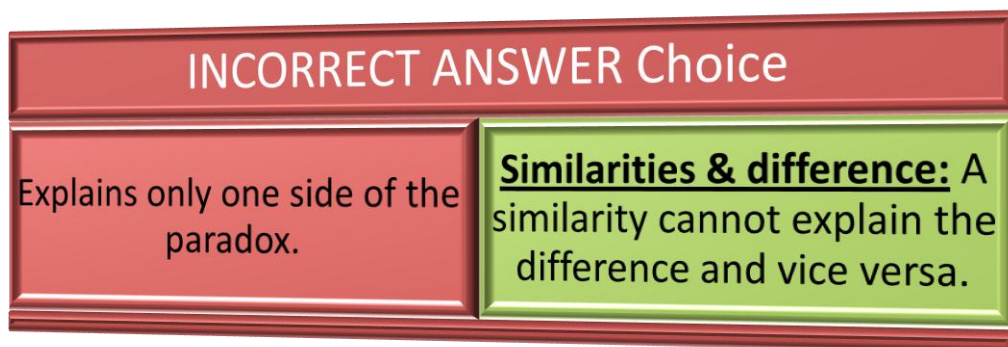
Elements appear in the premise but not in conclusion will appear in the answer choice.

## **Resolve the paradox**

The stimulus contains:

- + No conclusion: No conclusion is provided. Just sets of contradictory facts.
- + Language of contradiction: A contradiction is presented.

## **Incorrect Answer type:**



## **A correct Answer must:**

- + show that the 2 sides of paradox can co-exist. It should explain both side of the paradox.
- + address the facts of the situation.

## **METHOD OF REASONING**

### **How to approach MOR:**

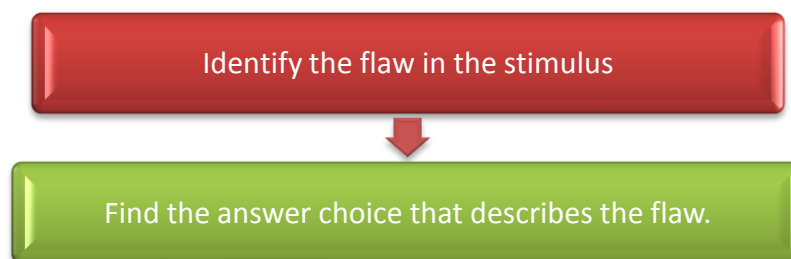
- ✚ Use the only information in the stimulus to prove the correct answer choice.
- ✚ Any answer choice that describes an element or a situation that does not occur in the stimulus is incorrect.
- ✚ Instead of identifying the facts of the argument, identify the logical organization of the argument.
- ✚ The stem refers to the method, technique, strategy or method used by the author while making the argument.

## **INCORRECT ANSWER CHOICE**

| New information                                                                                                           | Half Right, Half Wrong                                                                                                                                        | Exaggerated                                                                                                                                                              | Opposite                                                                                          | Reverse                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Something that did not occur or describes an element cannot be correct.</li></ul> | <ul style="list-style-type: none"><li>• Describes something that's mentioned in the stimulus with something that do not. Thus, making it incorrect.</li></ul> | <ul style="list-style-type: none"><li>• Takes a situation from the stimulus and stretch it to make an extreme statement that is not supported by the stimulus.</li></ul> | <ul style="list-style-type: none"><li>• It is the exact opposite of the correct answer.</li></ul> | <ul style="list-style-type: none"><li>• It contains familiar elements from the stimulus but reverses the order in the answer.</li></ul> |

## **Flaw in Reasoning**

### **Two steps to solve Flaw in reasoning questions:**



## **The common flaws in reasoning:**

**Uncertain use of a term or concept:** Using a term in different ways is inherently confusing & undermines the integrity of the argument.

**Source Argument:** It attacks the person or source instead of the argument. A speaker can never validly attack the character or motives of a person; instead a speaker must always attack the argument advanced by the person.

**Circular Reasoning:** The author assumes as true what is supposed to be proved.

**Errors of Conditional Reasoning:** It addresses the mistaken reversal or mistaken negation. The test taker mistakes sufficient condition with necessary condition or vice versa.

**Mistaken Cause & Effect:** As discussed earlier, all 5 condition applies.

**Straw Man:** When Author attempts to attack an opponent's position by ignoring actual statements made by the opposing speaker and instead distorts & refashions the argument.

**General lack of Relevant evidence for the Conclusion:** The author fails to provide any information to support the conclusion or provide informations that are irrelevant to the conclusion.

**Internal Contradiction:** When Author makes contradictory statements.

**Appeal Fallacies:** 3 types: Appeal to Authority; Appeal to Emotions; Appeal to Numbers/ popular opinion.

**Survey Errors:** 3 types: Biased Sample; Improperly constructed questions; Inaccurate responses.

**Exceptional Case or Overgeneralization:** It takes a small no. of instances and treat those instances as if they support broad, sweeping conclusion.

**Errors of Composition (EOC) & Division (EOD):** EOC occurs when the author attributes a characteristic of part or each member of the group to whole group. EOD occurs when the author attributes the characteristic of whole group to part of each member of the group..

**False Analogy:** When the author uses an analogy that is too dissimilar to the original situation to be applicable.

**False Dilemma:** Only 2 course of action are available when there may be others.

**Errors on the use of evidence:** 4 types: Lack of evidence for a position is taken to prove that the position is false & Vice versa; Some evidence against a position is taken to prove that position is false & Vice versa.

**Time Shift Errors:** It assumes that the condition will remain constant over time and that what was the case in the past will be the case in the present or future.

**Numbers & Percentage Errors:** An author improperly equates a percentage with a definite quantity or vice versa.

## **PARALLEL REASONING**

What to look for in Parallel reasoning:

- ✚ **The method of reasoning:** understand the type of reasoning presented in the stimulus. for e.g. Causal or conditional and look for same reasoning in Answer choice.
- ✚ **Validity of the Argument:** The validity (Valid or invalid) in the answer choice must match the validity (valid or invalid) in the stimulus.
- ✚ **Conclusion:** Match the conclusion in the answer choice to that in the stimulus. Matching in parallel reasoning means comparing the intent or certainty level. Matching the modifier (must, sometimes, always, some) works wonder in parallel reasoning.
- ✚ **Premises:** Like the conclusion, premises must match. Must be taken after matching the conclusion.

### **The order of use:**



---

### **What not to look after:**

- ✚ **Topic of Stimulus:** the topic or subject is irrelevant. The structure is important.
- ✚ **Order of Premises & conclusion:** Order of Premises & conclusion is irrelevant.

## **Numbers & Percentages:**

### **Numerical situations normally takes 3 elements:**

-  Overall Total
-  A number within Total
-  A percentage within Total

Without the knowledge of at least 2 of the above 3 elements, we cannot make any judgment about other element. When given a percentage, we cannot make any judgment on number unless overall total is known. Similarly, when number is given, we cannot make any judgment on percentage unless overall total is known.

### **Few Misconceptions to avoid that the test maker tests:**

- ☐ A increase in percentage doesn't necessarily mean increase in Number.
- ☐ A decrease in percentage does not necessarily mean decrease in number.
- ☐ Increase in number does not necessarily mean increase in percentage.
- ☐ Decrease in number does not necessarily mean decrease in percentage.
- ☐ Large number does not necessarily mean large percentage & small number does not necessarily mean small percentage.
- ☐ Large Percentage does not necessarily mean large number & small percentage does not necessarily mean small number.

### **What to avoid**

- ☐ If the stimulus contains percentage or proportion stimulus, avoid answer that contain numbers.
- ☐ If stimulus contains only numerical information, avoid answers that contain percentage or proportion.
- ☐ If stimulus contains both the number & percentage, any answer choice that contain number, percentage, or both may be correct.

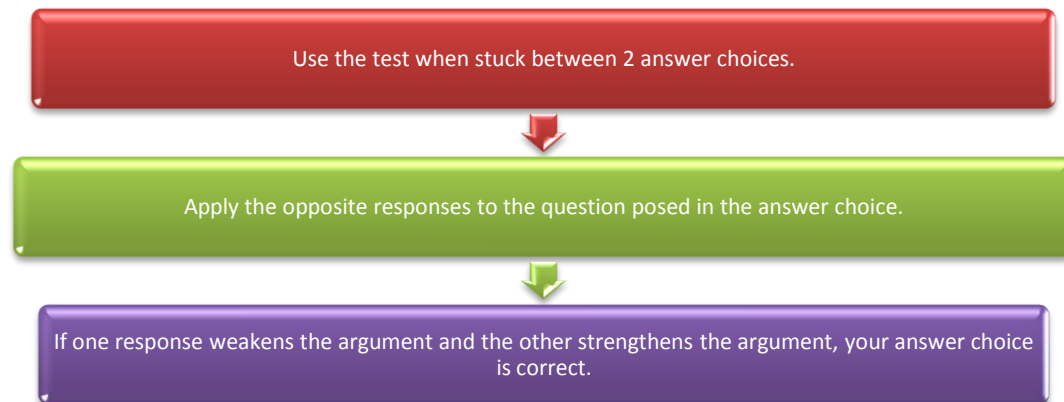
**In Strengthen & Weaken question:** An argument containing number & percentage, look for total number.

## **Evaluate Answer**

It is a combination of Family 2 and Family 3. The goal is to select a question that will Validate or invalidate the argument.

We can use Variance test to check the correct Answer

**Variance Test:** Steps to use Variance test:



## **EXAM TIPS:**

- ✚ Don't spend exorbitant time on one question.
- ✚ If you have spent 1 and half minute on a question, decide how long you will take complete the answer. If it takes long, move on quickly by guessing. If it takes less time, answer the question.

## **Pacing Technique:**

- ✚ During your practice sessions, focus on determining how fast you can do a typical Logical Reasoning question while retaining a high degree of accuracy. To do this, you will need to time yourself religiously.
- ✚ Make a benchmark for where you should be after either the first ten minutes or the first ten questions. Use easy to remember markers (such as 5, 10, 15, 20) so you won't forget your plan during the test or have to stop to think about it. If your Guideline is too complex to remember without writing down, it is too complex to use!
- ✚ Consider making a second benchmark for where you should be after either the first twenty minutes or the first fifteen questions

## **RON's VIDEOS**

**Assumption:** To succeed, personalize the passage. (put the passage in your own words.)

**Assumption must satisfies 2 condition:**

- ✚ it is not explicitly stated in the stimulus.
- ✚ Necessary for the argument to be valid - If you don't have assumption, argument dies.
- ✚ If there is a hole in the argument, then we need an assumption to fill the hole .
- ✚ If there is a clear challenge to the argument, we need an assumption to dismiss or counter that challenge.

Q. If a person chooses to walk rather than drive, there is one less vehicle emitting pollution into the air than there would be otherwise. Therefore if people would walk whenever it is feasible for them to do so, then pollution will be greatly reduced.

Which one of the following is an assumption on which the argument depends?

- A) Cutting down on pollution can be achieved in a variety of ways.
- B) Taking public transportation rather than driving is not always feasible.
- C) Walking is the only feasible alternative to driving that results in a reduction in pollution.
- D) There are people who never drive but who often walk.
- E) People sometimes drive when it is feasible to walk instead.

Answer: E

**A Takeaway:** When you are looking at assumption problem, weaker or more moderate statements are generally better.

**Reversal/ Negation Method:** Reverse the answer choice and if the conclusion fails, it is the correct answer.

Q. A famous singer recently won a lawsuit against an advertising firm for using another singer in a commercial to evoke the famous singer's well-known rendition of a certain song. As a result of the lawsuit, advertising firms will stop using imitators in commercials. Therefore, advertising costs will rise, since famous singers' services cost more than those of their imitators.

The conclusion above is based on which of the following assumptions?

- (A) Most people are unable to distinguish a famous singer's rendition of a song from a good imitator's rendition of the same song.
- (B) Commercials using famous singers are usually more effective than commercials using imitators of famous singers.
- (C) The original versions of some well-known songs are unavailable for use in commercials.
- (D) Advertising firms will continue to use imitators to mimic the physical mannerisms of famous singers.
- (E) The advertising industry will use well-known renditions of songs in commercials.

Answer: E

**A takeaway:** When you find the assumption, you need to be within the scope of the argument.



Q. The higher the level of certain vitamins and minerals in the bloodstream, the better a person's lung function, as measured by the amount of air the person can expel in one second. The lung function of smokers is significantly worse, on average, than that of nonsmokers. Clearly, therefore, one way for smokers to improve their lung function is for them to increase their intake of foods that are rich in these helpful vitamins and minerals.

Which of the following is an assumption on which this argument depends?

- A) Smokers are less likely than nonsmokers to have diets that are rich in vitamins and minerals
- B) The lung function of smokers whose diet are rich in those vitamins and minerals is generally better than that of nonsmokers with comparable diets
- C) People whose diets are deficient in those vitamins and minerals do not typically have other health problems in addition to diminished lung function.
- D) Stopping smoking will not typically improve lung function more than any diet changes can.
- E) Smoking does not introduce into the body chemicals that prevent the helpful vitamins and minerals from entering the bloodstream

Answer: E

Sample Question:

Marco is from Italy. Therefore, Marco likes to take naps during the day.

What is an assumption?

- A. People from Italy like to take naps during the day. (We need this)
- B. People from Europe like to take naps during the day. (We Don't need this)
- C. Either of the above.

Answer: A

Q. The technological conservatism of bicycle manufacturers is a reflection of the kinds of demand they are trying to meet. The only cyclist seriously interested in innovation and willing to pay for it are bicycle racers. Therefore, innovation in bicycle technology is limited by what authorities will accept as standard for purpose of competition in bicycle races.

Which of following is an assumption made in drawing the conclusion above?

- a) The market for cheap, traditional bicycle cannot expand unless the market for high-performance competition bicycles expands.
- b) High-performance bicycles are likely to be improved more as a result of technological innovations developed in small workshops than as a result of technological innovations developed in major manufacturing concerns.
- c) Bicycle racers do not generate a strong demand for innovations that fall outside what is officially recognized as standard for purpose of competition.
- d) The technology conservatism of bicycle manufacturers results primarily from their desire to manufacturer a product that can be sold without being altered to suit different national markets.
- e) The authorities who set standards for high-performance bicycle racing do not keep informed about innovative bicycle design.

Answer: C

Q. Because no employee wants to be associated with bad news in the eyes of a superior, information about serious problems at lower levels is progressively softened and distorted as it goes up each step in the management hierarchy. The chief executive is, therefore, less well informed about problems at lower levels than are his or her subordinates at those levels.

The conclusion drawn above is based on the assumption that

- (A) problems should be solved at the level in the management hierarchy at which they occur
- (B) employees should be rewarded for accurately reporting problems to their superiors
- (C) problem-solving ability is more important at higher levels than it is at lower levels of the management hierarchy
- (D) chief executives obtain information about problems at lower levels from no source other than their subordinates
- (E) some employees are more concerned about truth than about the way they are perceived by their superiors

Answer: D

Q. Traditionally, decision-making by managers that is reasoned step-by-step has been considered preferable to intuitive decision-making. However, a recent study found that top managers used intuition significantly more than did most middle-or lower-level managers. This confirms the alternate view that intuition is actually more effective than careful, methodical reasoning.

The conclusion above is based on which of the following assumptions?

- A. Methodical, step-by-step reasoning is inappropriate for making many real-life management decisions.
- B. Top managers have the ability to use either intuitive reasoning or methodical, step-by-step reasoning in making decisions.
- C. The decisions made by middle-or lower-level managers can be made easily by using Methodical reasoning as by intuitive reasoning.
- D. Top managers use intuitive reasoning in making majority of their decisions.
- E. Top managers are more effective at decision- making than middle-or lower-level managers.

Answer: E

Q. Most household appliances use electricity only when in use. Many microwave ovens, However, have built-in clocks and so use some electricity even when they are not in Use. The clocks each consume about 45 kilowatt-hours per year. Therefore, house Holds whose microwave oven has no built-in clock use 45 kilowatt-hours per year Less on average, than do comparable households microwave oven is other- wise similar but has a built-in clock.

Which of the following is an assumption on which the argument depends?

- A. Households that do not have a microwave oven use less energy per year, on average, than do households that have a microwave oven.
- B. Microwave ovens with a built-in clock do not generally cost more to buy than microwave ovens without a built-in clock.
- C. All households that have a microwave oven also have either a gas oven or a Conventional electric oven.
- D. Households whose microwave oven does not have a built-in clock are no more likely to have a separate electric clock plugged in than households whose microwave oven has one.
- E. There are more households that have a microwave oven with a built-in clock than there are households that have a microwave oven without a built-in clock.

Answer: D

Q. Gortland has long been narrowly self-sufficient in both grain and meat. However, as per capita income in Gortland has risen toward the world average, per capita consumption of meat has also risen toward the world average, and it takes several pounds of grain to produce one pound of meat. Therefore, since per capita income continues to rise, whereas domestic grain production will not increase, Gortland will soon have to import either grain or meat or both.

Which of the following is an assumption on which the argument depends?

- (A) The total acreage devoted to grain production in Gortland will soon decrease.
- (B) Importing either grain or meat will not result in a significantly higher percentage of Gortlanders' incomes being spent on food than is currently the case.
- (C) The per capita consumption of meat in Gortland is increasing at roughly the same rate across all income levels.
- (D) The per capita income of meat producers in Gortland is rising faster than the per capita income of grain producers.
- (E) People in Gortland who increase their consumption of meat will not radically decrease their consumption of grain.

Answer: E

Q. Roland: The alarming fact is that 90 percent of the people in this country now report that they know someone who is unemployed.

Sharon: But a normal, moderate level of unemployment is 5 percent, with 1 out of 20 workers unemployed. So at any given time if a person knows approximately 50 workers, 1 or more will very likely be unemployed.

Sharon's argument relies on the assumption that

- A. normal levels of unemployment are rarely exceeded.
- B. unemployment is not normally concentrated in geographically isolated segments of population.
- C.. the number of people who each know someone who is unemployed is always higher than 90% of the population.
- D. Roland is not consciously distorting the statistics he presents
- E. knowledge that a personal acquaintance is unemployed generates more fear of losing one's job than does knowledge of unemployment statistics

Answer: B

Most of the assumption answer will be negative statements - that dismisses the possible challenges. These statements are about what won't happen or what people won't do or what is not true.

If you have to guess, the you should preferentially guess negative statement as assumptions.

## **STRENGTHEN/ WEAKEN:**

- ✚ Answer choice must at least somewhat venture Outside the Scope of the immediate argument i.e. introduce new information.
  - the Upside: This is more like "normal human brain" working.
  - the downside: there is much greater variety of possible answers.
- ✚ **The best thing to do on Strengthen / Weaken is to simplify the argument.**
  - try to boil the argument to 1 or 2 statements.
- ✚ Restating something that is already stated in the argument is not a strengthener.

Excavation of the ancient city of Kourion on the island of Cyprus revealed a pattern of debris and collapsed buildings typical of towns devastated by earthquakes. Archaeologists have hypothesized that the destruction was due to a major earthquake known to have occurred near the island in A.D. 365.

Which of the following, if true, most strongly supports the archaeologists' hypothesis?

- (A) Bronze ceremonial drinking vessels that are often found in graves dating from years preceding and following A.D. 365 were also found in several graves near Kourion.
- (B) No coins minted after A.D. 365 were found in Kourion, but coins minted before that year were found in abundance
- (C) Most modern histories of Cyprus mention that an earthquake occurred near the island in A.D. 365.
- (D) Several small statues carved in styles current in Cyprus in the century between A.D. 300 and 400 were found in Kourion.
- (E) Stone inscriptions in a form of the Greek alphabet that was definitely used in Cyprus after A.D. 365 were found in Kourion.

Answer: B

Q. Capuchin monkeys in Venezuela often rub a certain type of millipede into their fur. Secretions of these millipedes have been shown to contain two chemicals that are potent mosquito repellents, and mosquitoes carry parasites that debilitate the capuchins. The rubbing behavior is rare except during the rainy season, when mosquito populations are at their peak. Therefore monkeys probably rub millipedes into their fur only because doing so helps protect them against mosquitoes.

Which of the following would be most useful to determine in order to evaluate the argument?

- A) Whether the two chemicals provide any protection for millipedes against their own repellents.
- B) Whether the type of millipede used by the capuchin monkeys in Venezuela is found in other parts of the world.
- C) Whether animals other than capuchins rub insects of any kind into their fur
- D) Whether the only time millipedes are readily available to capuchins is during rainy season
- E) Whether secretions of any other insects accessible to capuchins contain chemicals that repel the mosquitoes"

Answer: D

## **Bold Face Questions**

Two tiered approach to solve bold face questions:



### Ideal Approach

- Diagram the argument (either mentally or on paper)
- Predict the answer to the question.



### Back up : Classification of the statements

- Disadvantage: may not get you down to one answer choice.
- Advantage: Can employ this method even if you don't understand the argument.

## **Ideal Approach:**

Try and make a flow diagram of the argument:



Statements in boxes.



Arrows to represent the logical flow.



Sometimes Transition words ("but", etc) between these boxes.

**Q. In countries where automobile insurance includes compensation for whiplash injuries sustained in automobile accidents, reports of having suffered such injuries are twice as frequent as they are in countries where whiplash is not covered.** Presently, no objective test for whiplash exists, so it is true that spurious reports of whiplash injuries cannot be readily identified. Nevertheless, these facts do not warrant the conclusion drawn by some commentators that in the countries with the higher rates of reported whiplash injuries, half of the reported cases are spurious. Clearly, **in countries where automobile insurance does not include compensation for whiplash, people often have little incentive to report whiplash injuries that they actually have suffered.**

In the argument given, the two boldfaced portions play which of the following roles?

- (A) The first is a claim that the argument disputes; the second is a conclusion that has been based on that claim.
- (B) The first is a claim that has been used to support a conclusion that the argument accepts; the second is that conclusion.
- (C) The first is evidence that has been used to support a conclusion for which the argument provides further evidence; the second is the main conclusion of the argument.
- (D) The first is a finding whose implications are at issue in the argument; the second is a claim presented in order to argue against deriving certain implications from that finding.
- (E) The first is a finding whose accuracy is evaluated in the argument; the second is evidence presented to establish that the finding is accurate.

Answer: D

## Explain the situation:

You have a situation in which something might be expected to happen, but the opposite happens.

### Overall Review of Explain the situation CR problems:

- ✚ The primary challenge of these problems is to understand what the question actually is.
  - A template for these problems can help in understanding the problem:

----- is happening/ has happened/ is true,

Normally this would mean -----,

This time, -----, is happening/ has happened/ is true.

→ Explain this.

- ✚ The correct answer will always be outside the scope of the passage. (in at least some way)
  - If you see a choice that does stay inside the scope of the passage, it is incorrect.
- ✚ You will have to make reasonable assumption to make the connection required.
  - Do not use Formal Logic.
  - These are not must questions. We need an answer that can / might explain the paradox.

Q. For several years, per capita expenditure on prescription drugs in Voronia rose by fifteen percent or more annually. In order to curb these dramatic increases, the ministry of health prohibited drug manufacturers from raising any of their products' prices. Even though use of prescription drugs did not expand after this price freeze, per capita expenditure for prescription drugs continued to increase by a substantial percentage each year.

Which of the following, if true, most helps to explain why the ministry's action did not achieve its goal?

- (A) After price increases were prohibited, drug manufacturers concentrated on producing new medications to replace existing products.
- (B) The population of Voronia rose steadily throughout the period.
- (C) Improvements in manufacturing processes enabled drug manufacturers to maintain high profit levels on drugs despite the price freeze.
- (D) In addition to imposing a price freeze, the government encouraged doctors to prescribe generic versions of common drugs instead of the more expensive brand-name versions.
- (E) After price increases were prohibited, some foreign manufacturers of expensive drugs ceased marketing them in Voronia.

Answer: A

Q. Denoma, a major consumer-electronics maker, had a sizeable decline in sales revenue for its most recent fiscal year. This result appears surprising, because electronics retailers report that although their overall sales were considerably lower than in the previous year, their sales revenue from Denoma models actually grew, largely thanks to some innovative and popular models that Denoma introduced.

**Which of the following, if true, does most to explain the apparently surprising result?**

- A. Because of the need to educate the public about its new models' capabilities, Denoma's advertising spending was higher than normal over the period.
- B. For the period at issue, Denoma's major competitors reported declines in revenue that were, in percentage terms, greater than Denoma's.
- C. A significant proportion of Denoma's revenue comes from making components for other consumer-electronics manufacturers.
- D. Unlike some of its major competitors, Denoma has no lines of business outside consumer electronics to provide revenue when retail sales of consumer electronics are weak.
- E. During the period, consumer-electronics retailers sold remaining units of Denoma's superseded models at prices that were deeply discounted from those models' original prices.

**Answer: C**

Q. A popular beach has long had a dolphin feeding program in which fish are given to dolphins several times a day; many dolphins get as much as half of their food each day there. Although dolphins that first benefit from the program as adults are healthy and long-lived, their offspring have a lower life expectancy than offspring of dolphins that feed exclusively in the wild.

**Which of the following, if true, most helps to explain the lower life expectancy of offspring of dolphins feeding at the beach compared to other young dolphins?**

- A. Sharks that prey on dolphins are less common in the open seas off the beach than in many other areas of the open seas where dolphins congregate.
- B. Many of the adult dolphins that feed at the beach are females that nurse their offspring there.
- C. The fish given to the dolphins at the beach are the same types of fish that dolphins typically catch in the wild.
- D. Many dolphins that feed at the beach with their offspring come to the beach only a few times a month.
- E. Adult dolphins that feed at the beach spend much less time teaching their offspring how to catch fish in the wild than do other adult dolphins.

**Answer: E**

Q. When a new restaurant, Martin's Cafe, opened in Riverville last year, many people predicted that business at the Wildflower Inn, Riverville's only other restaurant, would suffer from the competition. Surprisingly, however, in the year since Martin's Cafe opened, the average number of meals per night served at the Wildflower Inn has increased significantly.

**Which of the following, if true, most helps to explain the increase?**

- A. Unlike the Wildflower Inn, Martin's Cafe serves considerably more meals on weekends than it does on weekdays.
- B. Most of the customers of Martin's Cafe had never dined in Riverville before this restaurant opened, and on most days Martin's Cafe attracts more customers than it can seat.
- C. The profit per meal is higher, on average, for meals served at Martin's Cafe than for those served at the Wildflower Inn.
- D. The Wildflower Inn is not open on Sundays, and therefore Riverville residents who choose to dine out on that day must either eat at Martin's Cafe or go to neighboring towns to eat.
- E. A significant proportion of the staff at Martin's Cafe are people who formerly worked at the Wildflower Inn and were hired away by the owner of Martin's Cafe.

**Answer: B**

Q. Many small roads do not have painted markings along their edges. Clear edge markings would make it easier for drivers to see upcoming curves and to judge the car's position on the road, particularly when visibility is poor, and would therefore seem to be a useful contribution to road safety. However, after Greatwater County painted edge markings on all its narrow, winding roads, the annual accident rate along those roads actually increased slightly.

**Which of the following, if true, most helps to explain the increase in accident rate?**

- A. Greatwater County has an unusually high proportion of narrow, winding roads.
- B. In bad weather it can be nearly as difficult for drivers to see the road as it is at night.
- C. Prior to the painting of the edge markings, Greatwater County's narrow, winding roads already had a somewhat higher accident rate than other Greatwater County roads.
- D. Many of the accidents on narrow, winding roads involve a single vehicle veering off the road, rather than the collision of two vehicles.
- E. After the markings were painted on the roads, many drivers who had gone out of their way to avoid driving on those roads at night no longer did so.

**Answer: E**

Q. Technological improvements and reduced equipment costs have made converting solar energy directly into electricity far more cost-efficient in the last decade. However, the threshold of economic viability for solar power (that is, the price per barrel to which oil would have to rise in order for new solar power plants to be more economical than new oil-fired power plants) is unchanged at thirty-five dollars.

**Which of the following, if true, does most to help explain why the increased cost-efficiency of solar power has not decreased its threshold of economic viability?**

- (A) The cost of oil has fallen dramatically.
- (B) The reduction in the cost of solar-power equipment has occurred despite increased raw material costs for that equipment.
- (C) Technological changes have increased the efficiency of oil-fired power plants.
- (D) Most electricity is generated by coal-fired or nuclear, rather than oil-fired, power plants.
- (E) When the price of oil increases, reserves of oil not previously worth exploiting become economically viable.

**Answer: C**



Q. A diet high in saturated fats increases a person's risk of developing heart disease. Regular consumption of red wine reduces that risk. Per-capita consumption of saturated fats is currently about the same in France as in the United States, but there is less heart disease there than in the United States because consumption of red wine is higher in France. The difference in regular red-wine consumption has been narrowing, but no similar convergence in heart disease rates has occurred.

Which of the following, if true, most helps to account for the lack of convergence noted above?

- A. Consumption of saturated fats is related more strongly to the growth of fatty deposits on artery walls, which reduce blood flow to the heart, than it is to heart disease directly.
- B. Over the past 30 years, per-capita consumption of saturated fats has remained essentially unchanged in the United States but has increased somewhat in France.
- C. Reports of the health benefits of red wine have led many people in the United States to drink red wine regularly.
- D. Cigarette smoking, which can also contribute to heart disease, is only slightly more common in France than in the United States.
- E. Regular consumption of red wine is declining dramatically among young adults in France, and heart disease typically does not manifest itself until middle age.

Answer: E

Q. Small-business groups are lobbying to defeat proposed federal legislation that would substantially raise the federal minimum wage. This opposition is surprising since the legislation they oppose would, for the first time, exempt all small businesses from paying any minimum wage.

Which of the following, if true, would best explain the opposition of small-business groups to the proposed legislation?

- (A) Under the current federal minimum-wage law, most small businesses are required to pay no less than the minimum wage to their employees.
- (B) In order to attract workers, small companies must match the wages offered by their larger competitors, and these competitors would not be exempt under the proposed laws.
- (C) The exact number of companies that are currently required to pay no less than the minimum wage but that would be exempt under the proposed laws is unknown.
- (D) Some states have set their own minimum wages---in some cases, quite a bit above the level of the minimum wage mandated by current federal law---for certain key industries.
- (E) Service companies make up the majority of small businesses and they generally employ more employees per dollar of revenues than do retail or manufacturing businesses.

Answer: B

### **TWO SUGGESTIONS For Explain the discrepancy**

- ✚ Make your own (Alternate) Correct Answers
  - There will be lot of ways to explain whatever "weirdness" exist.
- ✚ Make an Analogy for the passage
  - Same type of logic/ relationship
  - Different Subject Matter.

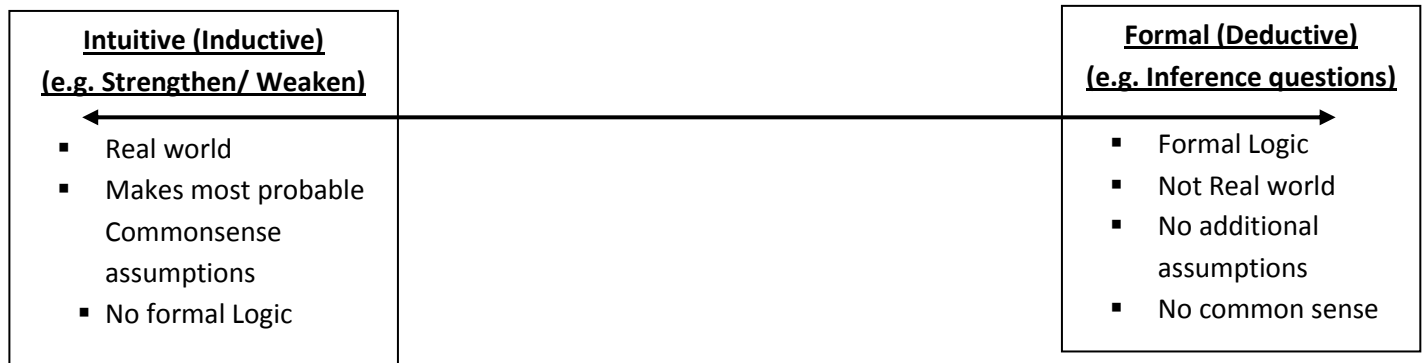
## **STRENGTHEN, WEAKEN & EVALUATE**

### **Example**

Psg: The unemployment rate in the New city area has increased from 5% to 9% last month. Therefore, the local economy of the New city area is in trouble.

Which of the following Weakens the above argument?

A.) New City is home to large state university that graduated 20,000 students last month.



### **How to approach Strengthen/ Weaken Questions:**

- ✚ Use Intuitive thinking.
- ✚ The overall argument, especially the relationships between the statements, is much more important.
- ✚ When you read the statements (in the passage or the answer choice)
  - Make commonsense assumption.
  - Interpret statements in the most probable real-world way.
- ✚ The answer choice will be somewhat outside the scope.

### **What to avoid in Strengthen / Weaken Questions:**

- ✚ Don't use Formal Logic.
- ✚ Don't worry about:
  - Classifying problems
  - Trying to find general rules that generate correct answers.

Q. In Morigia the average age of cars that are still in use has historically been seven years, but now it is nearly nine years. Car manufacturers claim that the current poor economy has forced people to put off buying new cars, and thus when the economy improves, the average age of cars will return to former levels.

Which of the following, if true, most seriously calls into question the car manufacturers' prediction?

- (A) Fewer cars per year are now being manufactured in Morigia than were being manufactured there five years ago.
- (B) When the threat of job loss is particularly strong, people are reluctant to commit themselves to expensive purchases.
- (C) The older a car is, the greater the amount of upkeep it requires.
- (D) The air-pollution control devices now being used in cars manufactured in Morigia cost less than those that were used seven years ago.
- (E) Most people in Morigia now believe that replacing an old car with a new one has very undesirable ecological consequences.

Answer: E

Q. Kernland imposes a high tariff on the export of unprocessed cashew nuts in order to ensure that the nuts are sold to domestic processing plants. If the tariff were lifted and unprocessed cashews were sold at world market prices, more farmers could profit by growing cashews. However, since all the processing plants are in urban areas, removing the tariff would seriously hamper the government's effort to reduce urban unemployment over the next five years.

Which of the following, if true, most seriously weakens the argument?

- A) Some of the byproducts of processing cashews are used for manufacturing paints and plastics.
- B) Other countries in which cashews are processed subsidize their processing plants.
- C) More people in Kernland are engaged in farming cashews than in processing them.
- D) Buying unprocessed cashews at lower than world market prices enables cashew processors in Kernland to sell processed nuts at competitive prices
- E) A lack of profitable crops is driving an increasing number of small farmers in Kernland off their land and into the cities.

Answer: E

Q. Northern Air has dozens of flights daily into and out of Belleville Airport, which is highly congested. Northern Air depends for its success on economy and quick turnaround and consequently is planning to replace its large planes with Skybuses, whose novel aerodynamic design is extremely fuel efficient. The Skybus' fuel efficiency results in both lower fuel costs and reduced time spent refueling.

Which of the following, if true, could present the most serious disadvantage for Northern Air in replacing their large planes with Skybuses?

- (A) The Skybus would enable Northern Air to schedule direct flights to destinations that currently require stops for refueling.
- (B) Aviation fuel is projected to decline in price over the next several years.
- (C) The fuel efficiency of the Skybus would enable Northern Air to eliminate refueling at some of its destinations, but several mechanics would lose their jobs.
- (D) None of Northern Air's competitors that use Belleville Airport are considering buying Skybuses.
- (E) The aerodynamic design of the Skybus causes turbulence behind it when taking off that forces other planes on the runway to delay their takeoffs.

Answer: E

## **EVALUATE**

If the stimulus provides a availability then answer choice presenting the available option is not the correct answer.

Most of the world's supply of uranium currently comes from the mines. It is possible to extract uranium from seawater, but the cost of doing so is greater than the price that Uranium fetches on the world market. Therefore, until the cost of extracting uranium from seawater can somehow be reduced, this method of obtaining uranium is unlikely to be commercially viable.

Which of the following would it be most useful to determine in evaluating the argument?

- a. Whether the uranium in deposits on land is rapidly being depleted
- b. Whether most uranium is used near where it is mined
- c. Whether there are any technological advances that show promise of reducing the costs of extracting uranium from seawater
- d. Whether the total amount of Uranium in seawater is significantly greater than the total amount of uranium on land
- e. Whether uranium can be extracted from freshwater at a cost similar to the cost of extracting it from seawater.

Answer: A

Q. TrueSave is a mail-order company that ships electronic products from its warehouses to customers worldwide. The company's shipping manager is proposing that customer orders be packed with newer, more expensive packing materials that virtually eliminate damage during shipping. The manager argues that overall costs would essentially remain unaffected, since the extra cost of the new packing materials roughly equals the current cost of replacing products returned by customers because they arrived in damaged condition.

Which of the following would it be most important to ascertain in determining whether implementing the shipping manager's proposal would have the argued-for effect on costs?

- A. Whether the products shipped by TrueSave are more vulnerable to incurring damage during shipping than are typical electronic products
- B. Whether electronic products are damaged more frequently in transit than are most other products shipped by mail-order companies
- C. Whether a sizable proportion of returned items are returned because of damage already present when those items were packed for shipping
- D. Whether there are cases in which customers blame themselves for product damage that, though present on arrival of the product, is not discovered until later
- E. Whether TrueSave continually monitors the performance of the shipping companies it uses to ship products to its customers

Answer: C

## CR Questions with fill in the sentence

A fill in the black can be:

- ✚ Draw a conclusion
- ✚ Strengthen/ Weaken
- ✚ Explain the discrepancy

**Draw a Conclusion:** A correct answer will be the one that restates the conclusion or draws the inference from one or more premises. It is always stated or implied in the stimulus. **It cannot be outside the scope.**

**Strengthen/ Weaken/ Explain the discrepancy:** A **correct answer will be the one that is outside the scope** and will support/ weak/ explain the conclusion.

Q. When people engage in activities that help others, their brain releases endorphins, the brain's natural opiates, which induce in people a feeling of well-being. It has been suggested that regular release of endorphins increases people's longevity. And a statistic on adults who regularly engage in volunteer work helping others shows that they live longer, on average, than adults who do not volunteer. However, that statistic would be what we would expect even if volunteering does not boost longevity, because \_\_\_\_\_

Which of the following most logically completes the argument?

- A. In the communities studied, women were much more likely to do regular volunteer work than men were, and women tend to live longer than men do.
- B. The number of young adults who do regular volunteer work is on the increase
- C. The feelings of well-being induced by endorphins can, at least for a time, mask the symptoms of various conditions and diseases, provided the symptoms are mild.
- D. It is rare for a person to keep up a regular schedule of volunteer work throughout his or her life.
- E. Some people find that keeping a commitment to do regular volunteer work becomes a source of stress in their lives.

Answer: A

Q. Which of the following most logically completes the argument?

Although the pesticide TDX has been widely used by fruit growers since the early 1960's, a regulation in force since 1960 has prohibited sale of fruit on which any TDX residue can be detected. That regulation is about to be replaced by one that allows sale of fruit on which trace amounts of TDX residue are detected. In fact, however, the change will not allow more TDX on fruit than was allowed in the 1960's, because \_\_\_\_\_.

- A. pre-1970 techniques for detecting TDX residue could detect it only when it was present on fruit in more than the trace amounts allowed by the new regulations
- B. many more people today than in the 1960's habitually purchase and eat fruit without making an effort to clean residues off the fruit
- C. people today do not individually consume any more pieces of fruit, on average, than did the people in the 1960's
- D. at least a small fraction of the fruit sold each year since the early 1960's has had on it greater levels of TDX than the regulation allows
- E. the presence of TDX on fruit in greater than trace amounts has not been shown to cause any harm even to children who eat large amounts of fruit

Answer: A

Q. Which of the following most logically completes the argument?

The growing popularity of computer-based activities was widely predicted to result in a corresponding decline in television viewing. Recent studies have found that, in the United States, people who own computers watch, on average, significantly less television than people who do not own computers. In itself, however, this finding does very little to show that computer use tends to reduce television viewing time, since\_\_\_\_\_.

- (A) many people who watch little or no television do not own a computer.
- (B) even though most computer owners in the United States watch significantly less television than the national average, some computer owners watch far more television than the national average.
- (C) computer owners in the United States predominately belong to a demographic group that have long been known to spend less time watching television than the population as a whole does.
- (D) many computer owners in the United States have enough leisure time that spending significant amounts of time on the computer still leaves ample time for watching television.
- (E) many people use their computers primarily for tasks such as correspondence that can be done more rapidly on the computer, and doing so leaves more leisure time for watching television.

Answer: C

Q. Which of the following most logically completes the passage?

Concerned about the well-being of its elderly citizens, the government of Runagia decided two years ago to increase by 20 percent the government-provided pension paid to all Runagians over 65. Inflation in the intervening period has been negligible, and the increase has been duly received by all eligible Runagians. Nevertheless, many of them are no better off financially than they were before the increase, in large part because \_\_\_\_\_.

- a) they rely entirely on the government pension for their income
- b) Runagian banks are so inefficient that it can take up to three weeks to cash a pension check
- c) they buy goods whose prices tend to rise especially fast in times of inflation
- d) the pension was increased when the number of elderly Runagians below the poverty level reached an all-time high
- e) in Runagia children typically supplement the income of elderly parents, but only by enough to provide them with a comfortable living

Answer: E

Q. Which of the following most logically completes the passage?

Using new detection techniques, researchers have found trace amounts of various medicinal substances in lakes and rivers. Taken in large quantities, these substances could have serious health effects, but they are present in quantities far too low to cause any physiological response in people who drink the water or bathe in it. Nevertheless, medical experts contend that eliminating these trace amounts from the water will have public health benefits, since \_\_\_\_\_.

- (A) some of the medicinal substances found in lakes and rivers are harmless to humans in large quantities
- (B) some of the medicinal substances found in lakes and rivers can counteract possible harmful effects of other such substances found there
- (C) people who develop undesirable side effects when being treated with medicines that contain these substances generally have their treatment changed
- (D) most medicinal substances that reach lakes or rivers rapidly break down into harmless substances
- (E) disease-causing bacteria exposed to low concentrations of certain medicinal substances can become resistant to them

Answer: E

Q. Which of the following most logically completes the argument?

Researchers recently asked dozens of shoppers, chosen at random coming out of a Food Basket supermarket, what they had purchased. The prices of the very same items at the nearest Shopper King supermarket were totaled and compared with the Food Basket total. The Shopper King totals averaged five percent higher than the Food Basket totals. Nevertheless, this result does not necessarily show that shoppers at Shopper King would save money overall by shopping at Food Basket instead, since \_\_\_\_\_.

- A. shoppers who shop regularly at a given supermarket generally choose that store for the low prices offered on the items that they purchase most often
- B. for shoppers with more than 20 items, the Shopper King totals averaged more than five percent higher than the Food Basket totals
- C. many shoppers consider factors other than price in choosing the supermarket at which they shop most regularly
- D. there is little variation from month to month in the overall quantity of purchases made at supermarkets by a given shopper
- E. none of the people who conducted the research were employees of the Food Basket supermarket

Answer: A

Q. Which of the following completes the argument below.

Twenty percent of the stores in Morganville's downtown shopping district will fail within five years because they will be competing directly with the Savemart discount department store newly opened in East Morganville. The downtown shopping district has lost business at this rate before and has always completely rebounded. Confidence that it will rebound again from the losses it is now about to suffer is ill founded, however, because \_\_\_\_\_

- A) the stores likely to be put out of business by direct competition from Savemart are the downtown shopping district's anchor stores, on whose ability to draw shoppers many of the other downtown stores depend
- B) the bus line that has long connected the downtown area of Morganville with East Morganville has a tradition of carrying shoppers who reside in East Morganville into downtown Morganville to shop
- C) when the downtown shopping district has rebounded before, the business premises of a failed business were typically taken over by a business of the same kind as had been there before
- D) Savemart's business plan for the East Morganville store is based on earning low profits, if any, during the first 5 years of store's existence
- E) it is conceivable that the downtown shopping district could shrink substantially without collapsing altogether

Answer: A

We need a reason why this business downturn is worse than before one.

C is not the correct answer as it talks about past occurrence but does not provide any detail on current situation. Hence, no rationale for why it might be more serious.

One of the most incorrect patterns on CR is a description of past behavior, it is trying to trick us into assuming that the past behavior will continue. We can't assume that past pattern will continue.

## Draw the Conclusion

**Meaning of Inference/ conclusion on GMAT:** Conclusion & Inference on GMAT must be true based on GMAT. We can prove it beyond any reasonable doubt. Conclusion and Inference must stay within the boundaries of the topics that are currently in the passage. **Correct answer must be within the scope of the argument.**

Finding of a survey of Systems magazine subscribers: Thirty percent of all merchandise orders placed by subscribers in response to advertisements in the magazine last year were placed by subscribers under age thirty-five.

Finding of a survey of advertisers in Systems magazine: Most of the merchandise orders placed in response to advertisements in Systems last year were placed by people under age thirty-five.

For both of the findings to be accurate, which of the following must be true?

- (A) More subscribers to Systems who have never ordered merchandise in response to advertisements in the magazine are age thirty-five or over than are under age thirty-five.
- (B) Among subscribers to Systems, the proportion who are under age thirty-five was considerably lower last year than it is now.
- (C) Most merchandise orders placed in response to advertisements in Systems last year were placed by Systems subscribers over age thirty-five.
- (D) Last year, the average dollar amount of merchandise orders placed was less for subscribers under age thirty-five than for those age thirty-five or over.
- (E) Last year many people who placed orders for merchandise in response to advertisements in Systems were not subscribers to the magazine.

Answer: E

Q. United Lumber will use trees from its forests for two products. The tree trunks will be used for lumber and the branches converted into wood chips to make fiberboard. The cost of this conversion would be the same whether done at the logging site, where the trees are debranched, or at United's factory. However, wood chips occupy less than half the volume of the branches from which they are made.

The information given, if accurate, most strongly supports which of the following?

- A. Converting the branches into wood chips at the logging site would require transporting a fully assembled wood-chipping machine to and from the site.
- B. It would be more economical to debranch the trees at the factory where the fiberboard is manufactured.
- C. The debranching of trees and the conversion of the branches into chips are the only stages in the processing of branches that it would be in United's economic advantage to perform at the logging site.
- D. Transportation costs from the logging site to the factory that are determined by volume of cargo would be lower if the conversion into chips is done at the logging site rather than at the factory.
- E. In the wood-processing industry, branches are used only for the production of wood chips for fiberboard.

Answer: D

Q. Parasitic wasps lay their eggs directly into the eggs of various host insects in exactly the right numbers for any suitable size of host egg. If they laid too many eggs in a host egg, the developing wasp larvae would compete with each other to the death for nutrients and space. If too few eggs were laid, portions of the host egg would decay, killing the wasp larvae.

Which of the following conclusions can properly be drawn from the information above?

- (A) The size of the smallest host egg that a wasp could theoretically parasitize can be determined from the wasp's egg-laying behavior.
- (B) Host insects lack any effective defenses against the form of predation practiced by parasitic wasps.
- (C) Parasitic wasps learn from experience how many eggs to lay into the eggs of different host species.
- (D) Failure to lay enough eggs would lead to the death of the developing wasp larvae more quickly than would laying too many eggs.
- (E) Parasitic wasps use visual clues to calculate the size of a host egg.

Answer: A



Q. That the application of new technology can increase the productivity of existing coal mines is demonstrated by the case of Tribnia's coal industry. Coal output per miner in Tribnia is double what it was five years ago, even though no new mines have opened.

Which of the following can be properly concluded from the statement about coal output per miner in the passage?

- A. If the number of miners working in Tribnian coal mines has remained constant in the past five years, Tribnia's total coal production has doubled in that period of time.
- B. Any individual Tribnian coal mine that achieved an increase in overall output in the past five years has also experienced an increase in output per miner.
- C. If any new coal mines had opened in Tribnia in the past five years, then the increase in output per miner would have been even greater than it actually was.
- D. If any individual Tribnian coal mine has not increased its output per miner in the past five years, then that mine's overall output has declined or remained constant.
- E. In Tribnia the cost of producing a given quantity of coal has declined over the past five years.

Answer: A

The "If" Condition do not have to be within the scope of the argument but Given that Hypothetical, We still have to prove the conclusion.

**Common Wrong Answer:** Moving from overall observation to Individual observation or vice versa.

Q. Comcorp Shipping Clerk: Last week, no shipments of building supplies were sent out on Friday. The five specially ordered shipments sent out last week were sent out on Thursday, and each of those specially ordered shipments consisted entirely of building supplies. Four shipments were sent to Truax Construction last week, none of which consisted of building supplies.

If the shipping clerk's statements are true, which of the following must also be true?

- a. All of Comcorp's shipments of building supplies last week were specially ordered.
- b. None of Comcorp's shipments sent on Friday of last week was sent to Truax Construction.
- c. None of the shipments sent by Comcorp to Truax Construction last week was specially ordered.
- d. None of Comcorp's shipments sent on Thursday of last week was sent to Truax Construction.
- e. All of Comcorp's shipments of building supplies last week were sent out on Thursday.

Answer: C

## **CR problems with Numbers/ Statistics**

When a problem has statistics, **Boil it down to essentials.**

**Premise:** put premise in ur words in a sentence or 2.

**Conclusion:** put the conclusion in ur words in a sentence.

**What we have to do:** put down whether there is a contrast, discrepancy, gap.

Q. In the United States, of the people who moved from one state to another when they retired, the percentage who retired to Florida has decreased by three percentage points over the past ten years. Since many local businesses in Florida 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?

- A. Florida attracts more people who move from one state to another when they retire than does any other state.
- B. The number of people who move out of Florida to accept employment in other states has increased over the past ten years.
- C. There are far more local businesses in Florida that cater to tourists than there are local businesses that cater to retirees.
- D. The total number of people who retired and moved to another state for their retirement has increased significantly over the past ten years.
- E. The number of people who left Florida when they retired to live in another state was greater last year than it was ten years ago.

Answer: D

Q. In Kravonia, the average salary for jobs requiring a college degree has always been higher than the average salary for jobs that do not require a degree. Over the last few years, the number of Kravonians enrolled in college has been growing steadily. Therefore, the number of Kravonians entering the job market who have at least the qualification of a college degree will eventually be significantly higher than it has been over the last few years.

Which of the following, if true, most seriously weakens the argument?

- A. Kravonians with more than one college degree earn little more, on average, than do Kravonians with only one college degree.
- B. The average number of years Kravonian college students remain enrolled before completing a degree has been increasing over the past several years.
- C. Despite the increase in the number of Kravonians attending college, the percentage of the population attending college is lower in Kravonia than in most other countries.
- D. In recent years, employers have been requiring college degrees for workers in jobs that were previously performed successfully by Kravonians who did not have college degrees.
- E. For many years, employers in Kravonia have had difficulty finding enough college graduates to fill the high-paying jobs that were available.

Answer: B

Q. In response to mounting public concern, an airplane manufacturer implemented a program with the well-publicized goal of reducing by half the total yearly amount of hazardous waste generated by its passenger-jet division. When the program began in 1994, the division's hazardous waste output was 90 pounds per production worker; last year it was 40 pounds per production worker. Clearly, therefore, charges that the manufacturer's program has not met its goal are false.

Which of the following is an assumption on which the argument depends?

- A. The amount of nonhazardous waste generated each year by the passenger-jet division has not increased significantly since 1994.
- B. At least as many passenger jets were produced by the division last year as had been produced in 1994.
- C. Since 1994, other divisions in the company have achieved reductions in hazardous waste output that are at least equal to that achieved in the passenger-jet division.
- D. The average number of weekly hours per production worker in the passenger-jet division was not significantly greater last year than it was in 1994.
- E. The number of production workers assigned to the passenger-jet division was not significantly less in 1994 than it was last year.

Answer: E

Like Percentages & Numbers, the ratio can also be tricky. Remember that Numerator and denominator can either or both factor in for the change in fraction.

Q. Because postage rates are rising, Home Decorator magazine plans to maximize its profits by reducing by one half the number of issues it publishes each year. The quality of articles, the number of articles published per year, and the subscription price will not change. Market research shows that neither subscribers nor advertisers will be lost if the magazine's plan is instituted.

Which of the following, if true, provides the strongest evidence that the magazine's profits are likely to decline if the plan is instituted?

- A. With the new postage rates, a typical issue under the proposed plan would cost about one-third more to mail than a typical current issue would.
- B. The majority of the magazine's subscribers are less concerned about a possible reduction in the quantity of the magazine's articles than about a possible loss of the current high quality of its articles.
- C. Many of the magazine's long-time subscribers would continue their subscriptions even if the subscription price were increased.
- D. Most of the advertisers that purchase advertising space in the magazine will continue to spend the same amount on advertising per issue as they have in the past.
- E. Production costs for the magazine are expected to remain stable.

Answer: D

### **Important points to remember:**

- ✚ Watch out for Statistics that don't comport with each other.
  - Percentage/ Ratio Vs Absolute Numbers
  - Per unit rates vs Aggregate totals.
- ✚ Make sure to boil down the arguments to their essentials.
  - Figure out what affects the conclusion or line of reasoning in the argument.
  - Stay focused

Q. The violent crime rate (number of violent crimes per 1,000 residents) in Meadowbrook is 60 percent higher now than it was four years ago. The corresponding increase for Parkdale is only 10 percent. These figures support the conclusion that residents of Meadowbrook are more likely to become victims of violent crime than are residents of Parkdale.

The argument above is flawed because it fails to take into account

- A. changes in the population density of both Parkdale and Meadowbrook over the past four years
- B. how the rate of population growth in Meadowbrook over the past four years compares to the corresponding rate for Parkdale
- C. the ratio of violent to nonviolent crimes committed during the past four years in Meadowbrook and Parkdale
- D. the violent crime rates in Meadowbrook and Parkdale four years ago
- E. how Meadowbrook's expenditures for crime prevention over the past four years compare to Parkdale's expenditures

Answer: D

**Takeaway:**

- ✚ Even when CR problems are statistical in nature, they are still conceptual.
- ✚ The point of Unit 1 per Unit 2 is generally to take out the confounding effect of unit 2. For e.g. per capita.
- ✚ Make your own Analogy.

Q. Corporate Officer: Last year was an unusually poor one for our chemical division, which has traditionally contributed about 60 percent of the corporation's profits. It is therefore encouraging that there is the following evidence that the pharmaceutical division is growing stronger: it contributed 45 percent of the corporation's profits, up from 20 percent the previous year.

On the basis of the facts stated, which of the following is the best critique of the evidence presented above?

- (A) The increase in the pharmaceutical division's contribution to corporation profits could have resulted largely from the introduction of single, important new product.
- (B) In multidivisional corporations that have pharmaceutical divisions, over half of the corporation's profits usually come from the pharmaceuticals.
- (C) The percentage of the corporation's profits attributable to the pharmaceutical division could have increased even if that division's performance had not improved.
- (D) The information cited does not make it possible to determine whether the 20 percent share of profits cited was itself an improvement over the year before.
- (E) The information cited does not make it possible to compare the performance of the chemical and pharmaceutical divisions in of the percent of total profits attributable to each.

Answer: C

Q. Twenty years ago, Balzania put in place regulations requiring operators of surface mines to pay for the reclamation of mined-out land. Since then, reclamation technology has not improved. Yet, the average reclamation cost for a surface coal mine being reclaimed today is only four dollars per ton of coal that the mine produced, less than half what it cost to reclaim surface mines in the years immediately after the regulations took effect.

Which of the following, if true, most helps to account for the drop in reclamation costs described?

- A. Even after Balzania began requiring surface mine operators to pay reclamation costs, coal mines in Balzania continued to be less expensive to operate than coal mines in almost any other country.
- B. In the twenty years since the regulations took effect, the use of coal as a fuel has declined from the level it was at in the previous twenty years.
- C. Mine operators have generally ceased surface mining in the mountainous areas of Balzania because reclamation costs per ton of coal produced are particularly high for mines in such areas.
- D. Even after Balzania began requiring surface mine operators to pay reclamation costs, surface mines continued to produce coal at a lower total cost than underground mines.
- E. As compared to twenty years ago, a greater percentage of the coal mined in Balzania today comes from surface mines.

Answer: C

**Takeaway:** Don't look at answer choice until you know what you are looking for.

Q. For the first time in history, more televisions than people can be found in American households. According to recent research, the average household has 2.55 residents and contains 2.73 televisions. However, by employing such costly manufacturing processes as plasma technology and flat screens, televisions are becoming too expensive for the typical consumer. As a result, the average number of residents per household will again surpass the number of televisions.

Which of the following, if true, most strongly supports the argument above?

- A. House parties at which numerous individuals gather to view popular television shows on one television set have increased three hundred percent during the past year.
- B. More than one million legal immigrants enter the United States each year.
- C. New devices such as video-enabled personal digital assistants and music players are increasingly purchased for use as a primary source of information and entertainment.
- D. As new technologies become more commonplace, manufacturing and retail costs normally decline.
- E. As a result of technological advances, new televisions are increasingly enabled with some features, such as Internet browsing, traditionally associated with other household devices.

Answer: C

**Takeaway:** do not postulate some random hypothetical -- which could be false just as easily as it could be true -- and then build an argument upon that random hypothetical.

**Tips:**

If you have more than one choice that seems to strengthen/weaken an argument:

- 1) if one of them is MORE DIRECTLY RELATED to the argument, then pick that one.
- otherwise,
- 2) if one of them makes MORE PROBABLE ASSUMPTIONS, then pick that one

## **STRENGTHEN/ WEAKEN QUESTIONS:**

- ✚ Strengthen/ Weaken questions have a very narrow focus.
- ✚ There is usually one issue that we are trying to address, we should ignore all other issues.
- ✚ All Strengtheners/ weakeners come from Outside the existing scope of what is given.
- ✚ It's impossible to do well in CR by trying to memorize rules.
- ✚ Two method that works well on CR
  - Generate your own examples
  - Personalize the arguments by
    - Pretending that someone (close) is telling the situation
    - Putting yourself in the situation
- ✚ In strengthen/ Weaken, point out the issue in Yes/ No type question and find the answer choice that addresses the issue.

Q. Insect infestations in certain cotton-growing regions of the world have caused dramatic increases in the price of cotton on the world market. By contrast, the price of soybeans has long remained stable. Knowing that cotton plants mature quickly, many soybean growers in Ortovia plan to cease growing soybeans and begin raising cotton instead, thereby taking advantage of the high price of cotton to increase their income significantly, at least over the next several years.

Which of the following, if true, most seriously weakens the plan's chances for success?

- A. The cost of raising soybeans has increased significantly over the past several years and is expected to continue to climb.
- B. Tests of a newly developed, inexpensive pesticide have shown it to be both environmentally safe and effective against the insects that have infested cotton crops.
- C. In the past several years, there has been no sharp increase in the demand for cotton and for goods made out of cotton.
- D. Few consumers would be willing to pay significantly higher prices for cotton goods than they are now paying.
- E. The species of insect that has infested cotton plants has never been known to attack soybean plants.

Answer: B

Q. Each bank in the town of La Rinconada has only a single set of locking doors at its entrance. In the town of Inverness, on the other hand, the entrances to nearly all banks are equipped with two sets of locking doors, operated by a mechanism that allows only one set of doors to be open at a time. It is clear, then, that banks in Inverness experience more robbery attempts than do those in La Rinconada, and have thus adopted the extra doors as a security measure.

Which of the following, if true, most weakens the argument above?

- a) Last year the number of bank robberies in La Rinconada was almost one-half greater than the corresponding figure for the previous year.
- b) Inverness is known for its harsh winters, while the climate of La Rinconada is quite temperate year-round.
- c) The mechanism of the double doors used by banks in Inverness allows bank security personnel to lock the doors remotely.
- d) Bank robbery attempts are typically unsuccessful, and, even when the robbers do manage to escape with stolen money, the sum is usually quite small.
- e) Inverness has almost twice as many police officers per capita as does La Rinconada.

Answer: B

Q. One of the limiting factors in human physical performance is the amount of oxygen that is absorbed by the muscles from the bloodstream. Accordingly, entrepreneurs have begun selling at gymnasiums and health club bottles of drinking water, labeled "SuperOXY," that has extra oxygen dissolved in the water. Such water would be useless in improving physical performance, however, since **the amount of oxygen in the blood who is exercising is already more than the muscles can absorb.**

Which of the following, if true, would serve the same function in the argument as the statement in boldface?

- A) world-class athletes turn in record performances without such water
- B) frequent physical exercise increases the body's ability to take in and use oxygen
- C) the only way to get oxygen into the bloodstream so that it can be absorbed by the muscles is through the lungs
- D) lack of oxygen is not the only factor limiting human physical performance
- E) the water lost in exercising can be replaced with ordinary tap water

Answer: C

Q. The snack food market has recently seen an explosion in the production and sales of "100- Calorie packs," individually wrapped portions of snack foods sized to provide exactly 100 calories per portion. These packs cost substantially more per ounce-they sell for nearly same price as traditionally sized portions, which are typically two to three times their size - but consumers have been purchasing them with greater and greater frequency. One possible explanation is convenience: Consumers may be relatively unconcerned with their subjective impression of the small packs, and willing to pay more to avoid having to measure out their portions. Another possible explanation is that 100-calorie pack, at least in the case of snacks for which it has sold well, represents the smallest portion that still looks and feels "substantial" enough to appeal to dieters who lack the self control to limit their consumption of snacks from larger packages.

Which of the following, if true, would support one of the given explanation and undermine the other?

- A. Consumers are willing to pay exactly the same price for 100-calorie packs sold in vending machine as for traditionally sized snack portions sold in vending machine.
- B. A large number of buyers of 100-calorie packs consume them as light desserts after large meals that have left them feeling too full for traditionally sized snack food.
- C. Although the 100-calorie packs have begun to sell well across a large variety of demographics, busy young professionals were the first group to purchase them frequently.
- D. Because the 100-calorie packs require more packaging per ounce of food than the traditionally sized portions do, manufacturers must charge more per ounce to make the same relative profit as on traditionally sized portions.
- E. Sales of 100-calorie packs have been uniformly poor at stores where they are displayed alongside traditionally sized portions, even for the same snacks whose 100-calorie packs are bestsellers at other stores.

Answer: E

Q. Tiger sharks are common in the waters surrounding Tenare Island. Usually tiger sharks feed on smaller sharks, but sometimes they have attacked tourists swimming and surfing at Tenare's beaches. This has hurt Tenare's tourism industry, which is second only to its fishing industry in annual revenues. In order to help the economy, therefore, the mayor of the island has proposed an ongoing program to kill any tiger sharks within a mile of the beaches.

Which of the following, if true, most strongly calls into question the likelihood that implementation of the mayor's proposal will have the desired consequence?

- A. Even if not all the tiger sharks that come close to the beaches are killed, the existence of the program would reassure tourists.
- B. Business owners who depend on tourism are willing to pay most of the cost of implementing the program.
- C. Tourists come to Tenare Island for its beaches, even though the island features a number of other tourist attraction.
- D. The small sharks on which tiger sharks prey feed on fish that are commercially important to the island's fisheries.
- E. Not all tourists who come to Tenare Island enjoy swimming or surfing.

Answer: D