

1. Which of the following could be the median of a set consisting of 6 different primes? (A) 2 (B) 3 (C) 9.5 (D) 12.5 (E) 39

2. In City X last April, was the average (arithmetic mean) daily high temperature greater than the median daily high temperature?
 - (1) In City X last April, the sum of the 30 daily high temperatures was 2,160°.
 - (2) In City X last April, 60 percent of the daily high temperatures were less than the average daily high temperature.

3. What is the median number of employees assigned per project for the projects at Company Z?
 - (1) 25 percent of the projects at Company Z have 4 or more employees assigned to each project.
 - (2) 35 percent of the projects at Company Z have 2 or fewer employees assigned to each project.

4. A certain bookcase has 2 shelves of books. On the upper shelf, the book with the greatest number of pages has 400 pages. On the lower shelf, the book with the least number of pages has 475 pages. What is the median number of pages for all of the books on the 2 shelves?
 - (1) There are 25 books on the upper shelf.
 - (2) There are 24 books on the lower shelf.

5. What is the value of n in the list above $k, n, 12, 6, 17$?
 - (1) $k < n$
 - (2) The median of the numbers in the list is 10.

6. Tom, Jane, and Sue each purchased a new house. The average (arithmetic mean) price of the three houses was \$120,000. What was the median price of the three houses?
 - (1) The price of Tom's house was \$110,000.
 - (2) The price of Jane's house was \$120,000.

7. a, b , and c are integers and $a < b < c$. S is the set of all integers from a to b , inclusive. Q is the set of all integers from b to c , inclusive. The median of set S is $(3/4)b$. The median of set Q is $(7/8)c$. If R is the set of all integers from a to c , inclusive, what fraction of c is the median of set R ?
 - (A) $3/8$
 - (B) $1/2$
 - (C) $11/16$
 - (D) $5/7$
 - (E) $3/4$

8. What is the median value of the set R , if for every term in the set, $R_n = R_{n-1} + 3$?
 - (1) The first term of set R is 15.
 - (2) The mean of set R is 36.

9. Peter, Paul, and Mary each received a passing score on his/her history midterm. The average (arithmetic mean) of the three scores was 78. What was the median of the three scores?

- (1) Peter scored a 73 on his exam. (2) Mary scored a 78 on her exam.

10. Last month 15 homes were sold in Town X. The average (arithmetic mean) sale price of the homes was \$

150,000 and the median sale price was \$130,000. Which of the following statement must be true? I. at least one of the homes was sold for more than \$165,000

II. at least one of the homes was sold for more than \$130,000 and less than \$150,000

III. at least one of the homes was sold for less than \$130,000

- a) I only b) II only c) III only d) I and II e) I and III

50–59	2
60–69	10
70–79	16
80–89	27
90–99	18

The table above shows the distribution of test scores for a group of management trainees, which score interval contains the median of the 73 scores?

- A. 60–69 B. 70–79 C. 80–89 D. 90–99 E. Can't get

12.

Ann	\$450,000
Bob	\$360,000
Cal	\$190,000
Dot	\$210,000
Ed	\$680,000

The table above shows the total sales recorded in July for the five salespeople. It was discovered that one of Cal's sales was incorrectly recorded as one of Ann's sales. After this error was corrected, Ann's total sales were still higher than Cal's total sales, and the median of 5 sales totals was \$330,000. What was the value of the incorrectly recorded sale?

13. If x and y are unknown positive integers, is the mean of the set $\{6, 7, 1, 5, x, y\}$ greater than the median of the set?

- (1) $x + y = 7$ (2) $x - y = 3$

14. Three boxes of supplies have an average (A.M.) weight of 7 kg and median of 9 kg. What is the maximum possible weight in kg of the lightest box?

- a)1 b)2 c)3 d)4 5)5

15. Is z the median of any 3 positive integers x, y and z ? (1) $x < y + z$ (2) $y = z$

16. If M is a positive odd integer, what is the average of a certain set of M integers?
 (1) The integers in the set are consecutive multiples of 3 (2) The median of the set of integers is 33
17. If x is an integer, is the median of the 5 numbers (x , 3, 1, 12, 8). greater than the average (arithmetic mean) of the 5 numbers?
 (1) $x > 6$ (2) x is greater than the median of the 5 numbers
18. Set S consists of five consecutive integers, and set T consists of seven consecutive integers. Is the median of the numbers in set S equal to the median of the numbers in set T ?
 (1) The median of the numbers in Set S is 0.
 (2) The sum of the numbers in set S is equal to the sum of the numbers in set T .
19. List K consists of 12 consecutive integers. If -4 is the least integer in the list K , what is the range of the positive integers in list K .
 A.3 B.6 C.7 D.11 E.5.5
20. The sum of the integers in list S is the same as the sum of the integers in list T . Does S contain more integers than T ?
 (1) The average (arithmetic mean) of the integers in S is less than the average of the integers in T .
 (2) The median of the integers in S is greater than the median of the integers in T .
21. In the sequence shown above, $a(n) = a(n-1) + k$, where $2 \leq n \leq 15$ and k is a non-zero constant. How many terms in the sequence are greater than 10?
 (1) $a(1) = 24$ (2) $a(8) = 10$
22. A certain list consists of five different integers. Is the average of the two greatest integers in the list greater than 70?
 (1) The median of the integers in the list is 70 (2) The average of the integers in the list is 70
23. Five pieces of wood have an average (arithmetic mean) length of 124 centimeters and a median length of 140 centimeters. What is the maximum possible length, in centimeters, of the shortest piece of wood?
 a) 90 b) 100 c) 110 d) 130 e) 140

