GRE Prep

Statistics

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Statistics

Statistics

1. 3, k, 2, m, 3, 8

The arithmetic mean of the list of numbers above is 4. If k and m are integers and $k \neq m$, what is the median of the list?

A. 2

B. 2.5

C. 3

D. 3.5

E. 4

Statistics

2. If *m* is the average (arithmetic mean) of the first 10 positive multiples of 5 and if M is the median of the first 10 positive multiples of 5, what is the value of M – m?

   A. -5

   B. 0

   C. 5

   D. 25

   E. 27.5

Statistics

3. If a certain sample of data has a mean of 20.0 and a standard deviation of 3.0, which of the following values is more than 2.5 standard deviations from the mean?

   A. 12

   B. 13.5

   C. 17

   D. 23.5

   E. 26.5

Statistics

4.

I. 72, 73, 74, 75, 76
II. 74, 74, 74, 74, 74
III. 62, 74, 74, 74, 89

The data sets, I, II, and III above are ordered from greatest standard deviation to least standard deviation in which of the following?

A. I, II, III

B. I, III, II

C. II, III, I

D. III, I, II

E. III, II, I

Statistics

5. 2, 4, 8, *n*, 3, 5, 7, 9, 6

   In this list above, if n is an integer between 1 and 10, inclusive, then the median must be

   A. Either 4 or 5

   B. Either 5 or 6

   C. Either 6 or 7

   D. n

   E. 5.5

Statistics

6. S is a set containing 9 different numbers. T is a set containing 8 different numbers, all of which are members of S, which of the following statements CANNOT be true?

   A. The mean of S is equal to the mean of T.

   B. The median of S is equal to median of T

   C. The range of S is equal to the range of T.

   D. The mean of S is greater than the mean of T.

   E. The range of S is less than range of T

Statistics

7. If the average (arithmetic mean) of x and y is 60 and the average (arithmetic mean) of y and z is 80, what is the value of z – x?

   A. 70

   B. 40

   C. 20

   D. 10

   E. It cannot be determined from the information given.

Statistics

8. The average (arithmetic mean) of 6 numbers is 8.5. When one number is discarded, the average of the remaining numbers becomes 7.2. What is the discarded number?

   A. 7.8

   B. 9.8

   C. 10.0

   D. 12.4

   E. 15.0

Statistics

9. The average of 5 positive integers a, b, c, d, and e is 16 where $a < b < c < d < e$. If $d = 30$, what is the greatest possible value of the median of these 5 integers?

Statistics

11. Of the 10 employees in a certain company, the mean salaries of 3 employees who are least paid is x and the mean salaries of the remaining highest paid employees is y.

Quantity A	**Quantity B**
Mean of salaries of all the employees	$\frac{x+y}{2}$

Statistics

12. Prices of 4 items are $100, $200, $300, $400.

Quantity A	Quantity B
SD of the final prices if a service charge of $100 is applied to each item	SD of the final prices if a service charge of 10% is applied to each item

Statistics

13. The random variable x is normally distributed. The values 650 and 850 are at the 60^{th} and 90^{th} percentiles of the distribution of X, respectively.

Quantity A	**Quantity B**
The value of the 75^{th} percentile.	750

Statistics

14. What is the mean of the values of the random variable X, whose relative frequency distribution is given in the table below:

X	Relative frequency
0	0.18
1	0.33
2	0.10
3	0.06
4	0.33

Statistics

15. Last year, a certain public transportation system sold an average (arithmetic mean) of 41,000 tickets per day on weekdays (Monday through Friday) and an average of 18,000 tickets per day on Saturday and Sunday. Which of the following is closest to the average number of tickets sold per day?

    A. 24,000

    B. 32,000

    C. 34,000

    D. 38,000

    E. 40,000

Statistics

16. Which of the following does not affect the median of a list of 5 different numbers? Select all that apply.

    A. Multiply each number by 2.

    B. Add 10 to each number.

    C. Increase the largest number only.

    D. Increase the smallest number only

    E. Decrease the smallest number only.

Statistics

17. The mean score of a group of male students is 110 and that of female students is 150. If the ratio of male students to that of female students is 3:5, then what is the average score after combining both groups?

Statistics

18. Each of the following linear equations defines y as a function of x for all integers x from 1 to 15. For which of the following equations is the standard deviation of the y-values corresponding to all the x-values, the greatest?

A. $y = \frac{x}{5}$

B. $y = x - 2$

C. $y = x + 5$

D. $y = 2x + 7$

E. $y = -4x - 9$

Statistics

19. In the terms: 5, 15, 40, 55, and X, the median of the given 5 numbers is 15. What will be the value of X so that the mean of these numbers is maximum?

    A. 5

    B. 14

    C. 15

    D. 40

    E. 56

Thank you