ALBERTA MATH 20-2 · UNIT 6 · 25 QUESTIONS

Statistical Reasoning — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The graph shows a student's first five quiz scores, in order. The mean of the scores is**

- A 11
- B 10
- C 12
- D 9

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2 **The median of the data set 14, 6, 11, 9, 20 is**

- A 9
- B 14
- C 11
- D 12

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3 The mode of the data set 4, 7, 4, 9, 7, 4, 12 is

- A 7
- B 9
- C 12
- D 4

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4 The range of the data set 23, 8, 17, 35, 12, 29 is

- A 23
- B 27
- C 35
- D 12

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5 **The mean of the data set 13, 17, 21, 25, 29 is _____**

ANSWER _____

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6 **The graph shows six values. The median of the values is**

A 15

B 19

C 16

D 17

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7 **In a course, term work is worth 30% of the final grade and the final exam is worth 70%. A student earns 84% on the term work and 76% on the final exam. The student's final grade is**

- A 78.4%
- B 80%
- C 77.2%
- D 81.6%

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8 **The standard deviation of a data set is 0. This means that**

- A the mean of the data set is 0
- B the data set contains only one value
- C every value in the data set is the same
- D the data is normally distributed

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9 **A teacher counts a student's first test twice and her second test three times. If she scored 80 on the first test and 90 on the second test, then her weighted mean test score is _____**

ANSWER _____

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10 **Which of the following data sets has the greatest standard deviation?**

A. 8, 9, 10, 11, 12

B. 2, 6, 10, 14, 18

C. 9, 10, 10, 10, 11

D. 5, 8, 10, 12, 15

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11 **The population standard deviation of the data set 2, 4, 4, 6, 9, to the nearest hundredth, is _____**

ANSWER _____

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12 **Driving times to work are normally distributed with a mean of 40 minutes and a standard deviation of 5 minutes. The percentage of driving times between 35 minutes and 45 minutes is approximately**

- A 95%
- B 50%
- C 99.7%
- D 68%

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13 **Heights of adult women are normally distributed with a mean of 170 cm and a standard deviation of 8 cm. The percentage of women with heights between 154 cm and 186 cm is approximately**

- A 95%
- B 68%
- C 99.7%
- D 50%

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14 **A test has a mean score of 74 and a standard deviation of 5. Leah scored 67 on the test. Her z-score, to the nearest tenth, is _____**

ANSWER _____

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15 **A value in a data set has a z-score of -2. This means the value is**

A two less than the mean

B two percent below the mean

C two standard deviations below the mean

D half of the mean

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16 **A baby's weight is in the 90th percentile. This means the baby**

A weighs 90% of the maximum recorded weight

B weighs more than approximately 90% of babies the same age

C is in the top 90% of babies the same age

D weighs 90% more than the average baby

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17 **Test scores are normally distributed with a mean of 250 and a standard deviation of 25. Approximately _____ % of the scores are below 200.**

ANSWER _____

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18 **The graph shows five of six numbers. The mean of all six numbers is 15. The sixth number is**

- A 12
- B 14
- C 15
- D 16

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19 **A student earns a mark of 76 in a 5-credit course and a mark of 88 in a 3-credit course. The student's weighted mean mark is**

- A 82
- B 79.5
- C 80.5
- D 84

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20 **The graph shows a normal distribution. A value in the data set has a z-score of -1.25. The value is _____**

ANSWER _____

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21 **Two classes write the same test and have the same mean. Class A's standard deviation is 2.1 and Class B's standard deviation is 4.8. A true statement is**

A Class B's scores vary more from the mean than Class A's scores

B Class A's scores vary more from the mean than Class B's scores

C Class B has a higher mean than Class A

D Class A has the larger standard deviation

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22 **For a normal distribution, the percentage of data with a z-score between -1 and 2 is approximately**

A 68%

B 81.5%

C 95%

D 47.5%

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23 **A course grade is based on assignments worth 25%, a project worth 25%, and a final exam worth 50%. A student earns 68% on the assignments, 84% on the project, and 78% on the final exam. The student's final grade, in percent, is _____**

ANSWER _____

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24 **In a class of 30 students, Jordan's science mark is higher than the marks of 24 of the students. Jordan's mark is approximately in the**

- A 20th percentile
- B 24th percentile
- C 80th percentile
- D 96th percentile

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25 **The graph shows a data set. A true statement about the data set is**

- A the median is greater than the mean
- B removing 88 does not change the mean
- C the value 88 affects the median more than the mean
- D the value 88 raises the mean well above the median

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ANSWER KEY

1. A
2. C
3. D
4. B
5. 21
6. D
7. A
8. C
9. 86
10. B
11. 2.37
12. D
13. A
14. -1.4
15. C
16. B
17. 2.5
18. D
19. C
20. 50
21. A
22. B
23. 77
24. C
25. D

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