ARKANSAS ALGEBRA II · UNIT 4 · 25 QUESTIONS

Statistics and Probability — 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 data set is 2, 4, 6, 8, 10. The mean is**

- A 6
- B 5
- C 8
- D 30

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2 **The data set is 3, 7, 9, 12, 15, 20. The median is**

- A 10.5
- B 9
- C 12
- D 11

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3 **The data set is 8, 8, 11, 14, 14, 14. The mode is**

- A 8
- B 11
- C 14
- D 9

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4 **The data set is 5, 13, 22, 30, 41. The range is**

- A 41
- B 5
- C 23
- D 36

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5 **The data set is 10, 10, 10, 10. The standard deviation is**

- A 0
- B 10
- C 5
- D 40

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6 **A data set has mean 100 and standard deviation 15. The z score of the value 130 is**

- A 30
- B 2
- C 15
- D 1

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7 **In a normal distribution, about how many values out of 100 lie within one standard deviation of the mean?**



A 50

B 95

C 68

D 99

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8 **A correlation coefficient of -0.9 describes a**

- A Weak positive relationship
- B No relationship
- C Weak negative relationship
- D Strong negative relationship

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9 **The slope of the regression line $y = 2x + 3$ is**

- A 2
- B 3
- C $\frac{2}{3}$
- D 5

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10 **Using $y = 3x + 1$, the predicted value at $x = 5$ is**

- **A** 15
- **B** 16
- **C** 18
- **D** 8

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11 **In a class of 30, 18 like math and 12 of those also like science Given a student likes math, the probability the student likes science is**

- **A** $\frac{1}{3}$
- **B** $\frac{2}{5}$
- **C** $\frac{2}{3}$
- **D** $\frac{3}{5}$

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12 **Which sample best represents all students in a school?**



A Only students in one class

B Only students who volunteer

C Only students on one team

D A random sample of all students

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13 **Events A and B are independent The probability of A is 0.6 and the probability of B is 0.5. The probability of both A and B is**

A 0.3

B 1.1

C 0.1

D 0.6

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14 **In 200 trials with probability 0.25 of success each time, the expected number of successes is**

A 25

B 50

C 75

D 800

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15 **In a data set, the first quartile is 20 and the third quartile is 55. The interquartile range is**

- A 75
- B 20
- C 35
- D 55

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16 **A data set has mean 20. A new value of 20 is added The new mean is**

- A 21
- B 19
- C 40
- D 20

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17 **Which data set has the larger standard deviation?**

A The set with values spread far from the mean

B The set with values close to the mean

C The set with the larger mean

D The set with more values

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18 **An extreme outlier usually affects which measure more?**

A The mode

B The mean

C The median

D The range only

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19 **Two fair dice are rolled The probability the sum is 7 is**



A $\frac{1}{12}$

B $\frac{5}{36}$

C $\frac{1}{6}$

D $\frac{7}{36}$

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20 **Two events are independent when**

- A They cannot both happen
- B They always happen together
- C They have the same probability
- D One does not affect the probability of the other

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21 **In a scatter plot with positive correlation, as x increases, the value of y tends to**

- A Increase
- B Decrease
- C Stay the same
- D Become zero

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22 **In a survey, 120 out of 300 people choose option A The fraction who choose option A is**



A $\frac{1}{3}$

B $\frac{2}{5}$

C $\frac{3}{5}$

D $\frac{1}{2}$

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23 **In a normal distribution, the mean and the median are**

- A Far apart
- B Unrelated
- C Equal
- D Opposite

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24 **A value with a negative z score lies**

- A Above the mean
- B At the mean
- C At zero
- D Below the mean

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25 **The mean of 12, 18, 24 is _____**

ANSWER

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ANSWER KEY

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

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