ALASKA 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 mean of 3, 6, 9, 12, 15 is**

- A 8
- B 9
- C 10
- D 12

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2 **The median of 4, 8, 12, 16, 20, 24 is**

- A 12
- B 16
- C 14
- D 20

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3 **The mode of 5, 5, 8, 9, 5, 8 is**

A 8

B 9

C 6

D 5

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4 **The range of 7, 13, 19, 25, 31 is**

A 31

B 7

C 19

D 24

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5 For the data 4, 8, 12, 16, 20, 24, 28, 32, the interquartile range is

- A 10
- B 26
- C 20
- D 16

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6 In a normal distribution with mean 80 and standard deviation 5, about what percent of values lie within two standard deviations of the mean?

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

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7 **For a score of 86 in a distribution with mean 80 and standard deviation 3, the z-score is**

A 6

B 3

C 2

D 1

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8 **The probability of drawing a face card from a standard 52-card deck is**



A $\frac{1}{4}$

B $\frac{3}{13}$

C $\frac{1}{13}$

D $\frac{1}{2}$

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9 **Two fair dice are rolled. The probability that the sum is 7 is**



A $\frac{1}{6}$

B $\frac{1}{12}$

C $\frac{7}{36}$

D $\frac{1}{3}$

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10 The number of combinations of 4 students chosen from 10 is

- A 210
- B 5040
- C 40
- D 120

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11 The number of permutations of 3 letters chosen from 8, in order, is

- A 56
- B 336
- C 168
- D 24

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12 The probability of exactly 1 head in 3 fair coin flips is



A $\frac{1}{8}$

B $\frac{1}{4}$

C $\frac{3}{8}$

D $\frac{1}{2}$

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13 **A regression line is y = 0.5x + 2. The predicted value of y when x = 10 is**

- A 5
- B 12
- C 2.5
- D 7

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14 **Which correlation coefficient shows the strongest linear relationship?**

- A -0.41
- B 0.62
- C -0.87
- D 0.79

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15 **A survey that asks only members of one sports team is most likely to be**

- **A** a random sample
- **B** biased
- **C** a census
- **D** an experiment

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16 **A game pays 20 dollars with probability $\frac{1}{4}$ and 0 dollars otherwise. The expected value, in dollars, is**

- **A** 20
- **B** 10
- **C** 5
- **D** 15

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17 **A bag has 4 red marbles and 6 blue marbles. Two marbles are drawn without replacement. The probability of a red marble then a blue marble is**



A $\frac{4}{15}$

B $\frac{2}{5}$

C $\frac{1}{3}$

D $\frac{8}{15}$

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18 **In a group of 60 students, 25 take math and 30 take science, with 10 taking both. The number who take neither subject is**

ANSWER _____

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19 **The standard deviation measures**

A the largest - the smallest value

B the middle value of a data set

C the most common value

D how spread out values are around the mean

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20 **Two events are independent if**

- A they always happen together
- B their probabilities add to 1
- C they cannot both happen
- D one does not change the probability of the other

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21 **In a normal distribution with mean 100 and standard deviation 12, a value 2 standard deviations below the mean is**

- A 124
- B 76
- C 88
- D 112

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22 **A scatter plot has correlation coefficient r = 0.91. This describes a**

- **A** strong positive linear relationship
- **B** weak positive linear relationship
- **C** strong negative linear relationship
- **D** no linear relationship

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23 **The probability of rain on a day is 0.3. The probability of no rain that day is**

- **A** 0.3
- **B** 1.3
- **C** 0.7
- **D** 0.03

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24 **The mean of 20, 30, 50, 60 is**

ANSWER

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25 An 8-section spinner has sections numbered 1 through 8. The probability of spinning an even number is



A $\frac{1}{8}$

B $\frac{1}{2}$

C $\frac{1}{4}$

D $\frac{3}{4}$

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ANSWER KEY

1. B
2. C
3. D
4. D
5. D
6. B
7. C
8. B
9. A
10. A
11. B
12. C
13. D
14. C
15. B
16. C
17. A
18. 15
19. D
20. D
21. B
22. A
23. C
24. 40
25. B

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