CALIFORNIA ALGEBRA II · UNIT 4 · 25 QUESTIONS

Statistics, Probability, and Modeling — 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 2, 4, 6, 8 is**

- A 6
- B 4
- C 20
- D 5

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2 **The median of 3, 5, 7, 9, 11 is**

A 7

B 11

C 9

D 5

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3 **The mode of 2, 3, 3, 7 is**

A 7

B 3

C 2

D 4

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4 The range of 5, 9, 14, 20 is

- A 9
- B 11
- C 25
- D 15

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5 The probability of rolling a 4 on a fair six sided die is

- A $\frac{1}{2}$
- B $\frac{1}{6}$
- C $\frac{1}{4}$
- D $\frac{1}{3}$

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6 The probability of two heads in two fair coin flips is

- A $\frac{1}{2}$
- B $\frac{1}{4}$
- C 1
- D $\frac{3}{4}$

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7 A bag has 3 red balls and 2 blue balls. The probability of drawing a red ball is

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

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8 **With the same bag, the probability of drawing a blue ball is**

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

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9 **The probability that two fair dice sum to 7 is**

- A $\frac{1}{6}$
- B $\frac{1}{12}$
- C $\frac{5}{36}$
- D $\frac{7}{36}$

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10 **A game pays $6 if a fair die shows 6 and $0 otherwise. The expected payout in dollars is**

- A 1
- B 3
- C 0
- D 6

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11 **A value of 80 has mean 70 and standard deviation 5. Its z-score is**

- A 10
- B 2
- C -2
- D 1

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12 **For a normal distribution with mean 100 and standard deviation 15, about what percent of values lie between 85 and 115?**

A 99.7%

B 95%

C 68%

D 50%

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13 **A correlation of -0.9 describes**

A a weak negative association

B a strong negative association

C no association

D a weak positive association

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14 **For the model y = 2x + 5, the predicted value when x = 4 is**

- A 13
- B 8
- C 9
- D 11

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15 **For the model y = 3x + 10, y increases by how much when x increases by 1?**

- A 3
- B 1
- C 10
- D 13

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16 If P(A) = $\frac{1}{2}$ and P(B) = $\frac{1}{3}$ for independent events, then P(A and B) is

- **A** $\frac{2}{3}$
- **B** $\frac{5}{6}$
- **C** $\frac{1}{6}$
- **D** $\frac{1}{5}$

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17 A bag has 4 red and 3 blue balls. One red ball is drawn and kept. The probability the next ball is red is

- **A** $\frac{3}{7}$
- **B** $\frac{3}{4}$
- **C** $\frac{1}{2}$
- **D** $\frac{4}{7}$

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18 With 3 shirts and 4 pairs of pants, the number of outfits is

- A 12
- B 7
- C 24
- D 9

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19 The number of ways to arrange 4 different books in a row is

- A 24
- B 16
- C 12
- D 8

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20 **The mean of 10, 20, 30, 40 is**

ANSWER _____

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21 **For the data 1, 3, 5, 7, 9, the interquartile range is**

A 8

B 4

C 6

D 5

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

- **A** Set B: 0, 10, 20
- **B** Neither has a standard deviation
- **C** They are equal
- **D** Set A: 10, 10, 10

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23 **A population that doubles each year is best modelled by**

- **A** a linear function
- **B** an exponential function
- **C** a quadratic function
- **D** a constant function

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24 **A survey that only asks people who choose to reply is most affected by**

A random sampling

B voluntary response bias

C a large sample size

D a small standard deviation

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25 **The number of outcomes when flipping 3 fair coins is**

ANSWER _____

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ANSWER KEY

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

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