NORTH DAKOTA ALGEBRA 2 · 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 2, 4, 6, 8, 10 is**

- A 5
- B 6
- C 7
- D 8

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

- A 9
- B 7
- C 11
- D 5

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3 **The mode of 4, 7, 4, 9, 7, 4 is**

A 4

B 6

C 7

D 9

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4 **The range of 2, 4, 6, 8, 10 is**

A 5

B 10

C 6

D 8

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5 **For the data 2, 4, 6, 8, 10, 12, 14, the interquartile range is**

- A 6
- B 10
- C 8
- D 12

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6 **In a normal distribution with mean 100 and standard deviation 15, about what percent of values lie within one standard deviation of the mean?**

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

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7 **For a score of 130 in a distribution with mean 100 and standard deviation 15, the z-score is**

A 3

B 30

C 1

D 2

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8 **The probability of rolling a 5 on a fair six-sided die is**



A $\frac{1}{2}$

B $\frac{1}{6}$

C $\frac{1}{3}$

D $\frac{5}{6}$

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9 **The probability of drawing a red card from a standard 52-card deck is**



A $\frac{1}{4}$

B $\frac{1}{2}$

C $\frac{1}{13}$

D $\frac{3}{4}$

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10 The probability of drawing an ace from a standard 52-card deck is

A $\frac{1}{13}$

B $\frac{1}{4}$

C $\frac{4}{13}$

D $\frac{1}{52}$

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11 The probability of getting heads on both of two fair coin flips is



A $\frac{3}{4}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{1}{4}$

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12 The number of combinations of 3 students chosen from 8 is

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

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13 The number of permutations of 2 letters chosen from 6, in order, is

- A 12
- B 15
- C 30
- D 36

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14 The probability of exactly 2 heads in 3 fair coin flips is

- **A** $\frac{3}{8}$
- **B** $\frac{1}{2}$
- **C** $\frac{5}{8}$
- **D** $\frac{1}{8}$

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15 A regression line is y = 2x + 3. The predicted value of y when x = 4 is

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

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

A -0.30

B 0.45

C -0.92

D 0.85

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17 **A survey that asks only students in one classroom is most likely to be**



A a random sample

B biased

C a census

D an experiment

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18 **In a group of 40 students, 12 play soccer and 18 play basketball, with 5 playing both. The number who play neither sport is**

ANSWER

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19 **A bag has 3 red marbles and 5 blue marbles. The probability of drawing a blue marble is**



A $\frac{5}{8}$

B $\frac{5}{3}$

C $\frac{3}{5}$

D $\frac{3}{8}$

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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 **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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22 A fair die is rolled twice. The probability that both rolls are even is

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

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

ANSWER _____

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24

In a normal distribution with mean 50 and standard deviation 10, a value of 70 is how many standard deviations above the mean?

A 2

B 3

C 20

D 1

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25 **A game pays 10 dollars with probability $\frac{1}{2}$ and 0 dollars with probability $\frac{1}{2}$. The expected value, in dollars, is**



A 5

B 2.50

C 10

D 0

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ANSWER KEY

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

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