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

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