ARIZONA STATISTICS · UNIT 2 · 25 QUESTIONS

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



A $\frac{1}{52}$

B $\frac{1}{13}$

C $\frac{1}{4}$

D $\frac{1}{2}$

Understand It with Pulse | Flag a mistake

2 **Two fair dice are rolled. The probability that the sum is 8 is**



A $\frac{1}{6}$

B $\frac{5}{36}$

C $\frac{1}{12}$

D $\frac{1}{9}$

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

A $\frac{1}{9}$

B $\frac{5}{36}$

C $\frac{1}{6}$

D $\frac{1}{12}$

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4 **The probability of exactly 2 heads in 4 fair coin flips is**



A $\frac{1}{4}$

B $\frac{3}{8}$

C $\frac{1}{2}$

D $\frac{1}{8}$

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5 The probability of at least one head in 3 fair coin flips is

- **A** $\frac{1}{2}$
- **B** $\frac{3}{4}$
- **C** $\frac{7}{8}$
- **D** $\frac{1}{8}$

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6 The number of combinations of 3 students chosen from 6 is

- **A** 120
- **B** 20
- **C** 18
- **D** 60

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7 **The number of permutations of 2 letters chosen from 5, in order, is**

A 20

B 10

C 25

D 120

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8 **A bag has 5 red marbles and 5 blue marbles. Two are drawn without replacement. The probability both are red is**



A $\frac{1}{4}$

B $\frac{2}{9}$

C $\frac{1}{9}$

D $\frac{1}{2}$

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9 **A bag has 3 red marbles and 7 blue marbles. One red marble is drawn and kept. The probability the next marble is red is**

- **A** $\frac{1}{3}$
- **B** $\frac{2}{9}$
- **C** $\frac{3}{10}$
- **D** $\frac{1}{5}$

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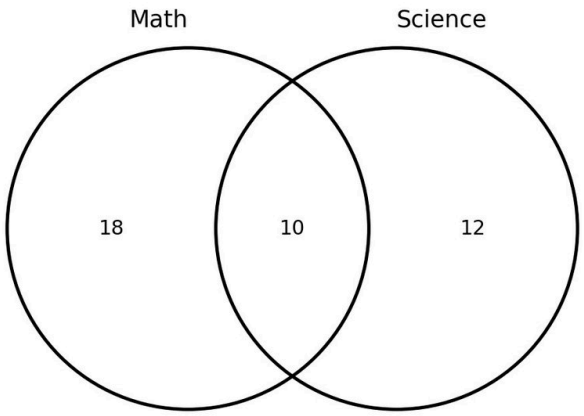
10

The diagram shows students taking math and science. How many take math only?



Question 10

The diagram shows students taking math and science. How many take math only?

A) 10

B) 12

C) 18

D) 28

- **A** 10
- **B** 12
- **C** 18
- **D** 28

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11 **In a group of 50 students, 28 take math and 22 take science, with 10 taking both The number who take neither subject is**

ANSWER _____

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12 **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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13 **Two events that cannot both happen are called**

A Independent

B Mutually exclusive

C Complementary

D Conditional

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14 **The probability of rain on a day is 0.25. The probability of no rain that day is**



A 0.25

B 1.25

C 0.75

D 0.025

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15 A 12-section spinner has sections numbered 1 through 12. The probability of spinning a multiple of 3 is

- **A** $\frac{1}{12}$
- **B** $\frac{1}{4}$
- **C** $\frac{1}{3}$
- **D** $\frac{1}{2}$

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16 A game pays 30 dollars with probability $\frac{1}{5}$ and 0 dollars otherwise. The expected value, in dollars, is

ANSWER _____

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17 **If P(A) = 0.4 and P(B) = 0.5 and A and B are independent, then P(A and B) is**

A 0.9

B 0.2

C 0.1

D 0.45

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18 **If P(A) = 0.3 and P(B) = 0.4 and A and B are mutually exclusive, then P(A or B) is**

A 0.12

B 0.1

C 0.7

D 0.35

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19 As the number of trials grows, the observed relative frequency tends to approach the true probability. This is the

- **A** Law of large numbers
- **B** Central limit theorem
- **C** Addition rule
- **D** Multiplication rule

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20 A fair coin is flipped three times. The probability of three heads is

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

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21 **The probability of exactly 1 head in 4 fair coin flips, as a decimal, is**

ANSWER

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22 **In a class, 0.6 of students play a sport and 0.5 play an instrument If the choices are independent, the probability a student does both is**



A 1.1

B 0.1

C 0.3

D 0.6

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23 A card is drawn from a standard deck. The probability it is a heart or a king is

- **A** $\frac{4}{13}$
- **B** $\frac{1}{4}$
- **C** $\frac{17}{52}$
- **D** $\frac{1}{2}$

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24 The sample space for rolling one fair die has how many outcomes?

- **A** 2
- **B** 6
- **C** 12
- **D** 36

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25 **A fair die is rolled. The probability of rolling a number greater than 4 is**

A $\frac{1}{6}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{2}{3}$

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ANSWER KEY

1. B
2. B
3. A
4. B
5. C
6. B
7. A
8. B
9. B
10. C
11. 10
12. D
13. B
14. C
15. C
16. 6
17. B
18. C
19. A
20. B
21. 0.25
22. C
23. A
24. B
25. B

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