ARKANSAS 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 **A fair coin is tossed once The probability of getting heads is**



A 0.5

B 0.25

C 0.75

D 1

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2 **A fair six sided die is rolled once The probability of rolling an even number is**

A 0.17

B 0.33

C 0.67

D 0.5

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3 **An event has probability 0.3 The probability that the event does not happen is**

A 0.7

B 0.3

C 1.3

D 0.03

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4 **A fair coin is tossed twice The probability of two heads in a row is**

- A 0.5
- B 0.25
- C 0.75
- D 1

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5 **A bag has 3 red balls and 7 blue balls One ball is drawn at random The probability it is red is**



A 0.7

B 0.5

C 0.3

D 0.1

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6 **Events A and B cannot happen at the same time, with probabilities 0.2 and 0.3 The probability of A or B is**

- A 0.06
- B 0.1
- C 0.6
- D 0.5

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7 **The probability of A is 0.4, the probability of B is 0.5, and the probability of both is 0.2 The probability of A or B is**

- A 0.7
- B 0.9
- C 0.2
- D 1.1

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8 **The probability of A is 0.4 and the probability of both A and B is 0.12 The probability of B given A is**

A 0.48

B 0.3

C 0.12

D 0.52

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9 **A spinner has 4 equal sections numbered 1, 2, 3, and 4 The probability of spinning a 4 is**



A 0.2

B 0.5

C 0.25

D 0.75

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10 **Two fair coins are tossed The probability of exactly one head is**

- A 0.25
- B 0.75
- C 1
- D 0.5

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11 **A game pays 20 dollars with probability 0.1 and 0 dollars otherwise The expected value of the game is**

- A 2 dollars
- B 0.5 dollars
- C 10 dollars
- D 20 dollars

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12 **A game pays 10 dollars with probability 0.5 and 0 dollars otherwise The expected value of the game is**

- A 2.5 dollars
- B 5 dollars
- C 7.5 dollars
- D 10 dollars

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13 **A binomial experiment has 20 trials with success probability 0.3 The mean number of successes is**

- A 3
- B 14
- C 6
- D 20

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14 **A binomial experiment has 100 trials with success probability 0.5 The standard deviation is the square root of 25 The standard deviation is**

A 2.5

B 10

C 25

D 5

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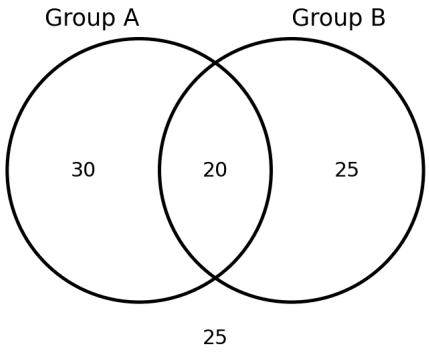
15 **The diagram shows 100 students surveyed 30 are in group A only, 20 are in both groups, 25 are in group B only, and 25 are in neither group The probability that a randomly chosen student is in group A is**



A 0.5

B 0.3

C 0.55

D 0.75

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16 **Two events are independent if knowing one event happened**

A Changes the probability of the other

B Does not change the probability of the other

C Makes the other certain

D Makes the other impossible

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17 **As the number of trials grows, the observed proportion tends toward the true probability This is the law of**

A Small numbers

B Averages only

C Large numbers

D Independence

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18 **A bag has 5 red marbles and 5 blue marbles One marble is drawn and kept, then a second marble is drawn The second draw depends on the first because the draws are**

A Independent

B With replacement

C Mutually exclusive

D Without replacement

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19 **A six sided die is rolled and a coin is tossed The die result and the coin result are**



A Independent

B Dependent

C Mutually exclusive

D Identical

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20 **The probability of an impossible event is**

- A 0.5
- B 0
- C 1
- D Negative

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21 **The probability of a certain event is**

- A 0
- B 0.5
- C 1
- D 2

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22 **A card is drawn from a standard deck of 52 cards The probability it is an ace is 4 out of 52 The probability written as a decimal rounded to two places is about**



A 0.04

B 0.13

C 0.25

D 0.08

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23 **If the probability of rain on a day is 0.4 The probability of no rain that day is**



A 0.6

B 0.4

C 0.8

D 1.4

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24 **An event has probability 0.15 What is the probability that the event does not happen**

ANSWER

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25 **Two fair coins are tossed What is the probability of two tails**

ANSWER

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ANSWER KEY

1. A
2. D
3. A
4. B
5. C
6. D
7. A
8. B
9. C
10. D
11. A
12. B
13. C
14. D
15. A
16. B
17. C
18. D
19. A
20. B
21. C
22. D
23. A
24. 0.85
25. 0.25

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