ALBERTA MATH 30-2 · UNIT 3 · 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 card is drawn at random from a standard deck of 52 cards. The probability that the card is a king is**

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

Understand It with Pulse | Flag a mistake

2 The probability of an event is $\frac{3}{8}$. The odds in favour of the event are

- **A** 5:3
- **B** 3:5
- **C** 3:8
- **D** 8:5

Understand It with Pulse | Flag a mistake

3 The odds against a horse winning a race are 7:3 . The probability that the horse wins the race is

- **A** $\frac{7}{10}$
- **B** $\frac{3}{7}$
- **C** $\frac{3}{10}$
- **D** $\frac{7}{3}$

Understand It with Pulse | Flag a mistake

4 **Two standard dice are rolled. The probability that the sum of the two numbers rolled is 7 is**

A $\frac{5}{36}$

B $\frac{7}{36}$

C $\frac{1}{7}$

D $\frac{1}{6}$

Understand It with Pulse | Flag a mistake

5 **A coin was flipped 80 times and landed on heads 46 times. The experimental probability of landing on heads, expressed as a decimal, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Events A and B are mutually exclusive. If P(A) = 0.3 and P(B) = 0.45 , then P(A or B) is**

- A 0.135
- B 0.60
- C 0.15
- D 0.75

Understand It with Pulse | Flag a mistake

7 **In a class of 30 students, 18 play soccer, 12 play basketball, and 5 play both sports. The probability that a randomly chosen student plays soccer or basketball is**

- A $\frac{7}{10}$
- B $\frac{5}{6}$
- C 1
- D $\frac{2}{3}$

Understand It with Pulse | Flag a mistake

8 **A coin is flipped and a standard die is rolled. The probability of getting heads and rolling a 4 is**

- **A** $\frac{1}{3}$
- **B** $\frac{2}{3}$
- **C** $\frac{1}{12}$
- **D** $\frac{1}{8}$

Understand It with Pulse | Flag a mistake

9 **A bag contains 5 red marbles and 3 green marbles. Two marbles are drawn without replacement. The probability that both marbles are red is**

- **A** $\frac{5}{14}$
- **B** $\frac{25}{64}$
- **C** $\frac{5}{16}$
- **D** $\frac{3}{7}$

Understand It with Pulse | Flag a mistake

10 **A standard die is rolled twice. The probability of rolling at least one 6 , to the nearest hundredth, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A card is drawn from a standard deck. Given that the card is a face card, the probability that it is a king is**

A $\frac{1}{13}$

B $\frac{4}{13}$

C $\frac{1}{4}$

D $\frac{1}{3}$

Understand It with Pulse | Flag a mistake

12 **The graph below shows the probability distribution for the points scored on one spin of a spinner. The expected value of one spin is**

- **A** 4 points
- **B** 3 points
- **C** 6 points
- **D** 2 points

Understand It with Pulse | Flag a mistake

13 **The probability that a randomly chosen student passes a test is 0.85 . The odds against the student passing are**

- **A** 17:3
- **B** 3:20
- **C** 3:17
- **D** 20:3

Understand It with Pulse | Flag a mistake

14 **Two standard dice are rolled. The probability that the sum is 8 or 11 , to the nearest hundredth, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **For two events A and B , P(A or B) = 0.8 , P(A) = 0.5 , and P(B) = 0.45 . The value of P(A and B) is**

A 0.15

B 0.25

C 0.05

D 0.95

Understand It with Pulse | Flag a mistake

16 **A basketball player makes a free throw with probability 0.80 . The probability that she makes both of two free throws, expressed as a decimal, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **Two cards are drawn from a standard deck without replacement. The probability that the first card is a heart and the second card is a spade, to the nearest thousandth, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **In a survey of 200 students, 120 like hockey, 80 like soccer, and 50 like both. Given that a randomly chosen student likes hockey, the probability that the student also likes soccer is**

A $\frac{1}{4}$

B $\frac{5}{12}$

C $\frac{5}{8}$

D $\frac{2}{5}$

Understand It with Pulse | Flag a mistake

19 **The graph below shows the probability distribution for the points scored in a game. The expected value of the game, in points, is**

- **A** 2.1
- **B** 0.5
- **C** 1.1
- **D** -1.1

Understand It with Pulse | Flag a mistake

20 **A marksman hits a target with probability 0.7 on each shot, independently. The probability that she hits the target on all three of three shots, to the nearest hundredth, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **Which pair of events is mutually exclusive?**

A Drawing one card from a deck and getting a red card and a black card

B Rolling a die and getting a prime number and an even number

C Drawing one card from a deck and getting a king and a heart

D Rolling a die and getting a 2 and an even number

Understand It with Pulse | Flag a mistake

22 **If P(A) = 0.4 and P(A and B) = 0.12 , then the conditional probability of B , given A , is**

A 0.48

B 0.3

C 0.12

D 0.52

Understand It with Pulse | Flag a mistake

23 Two cards are drawn from a standard deck without replacement. The probability that neither card is an ace, to the nearest hundredth, is _____

ANSWER _____

Understand It with Pulse | Flag a mistake

24 A raffle sells 500 tickets for one prize. Jake buys 4 tickets. The odds in favour of Jake winning the prize are

A 1:124

B 4:125

C 1:125

D 124:1

Understand It with Pulse | Flag a mistake

25 **A bag contains 5 red marbles and 7 blue marbles. Two marbles are drawn without replacement. The probability that one marble is red and the other is blue is**

A $\frac{35}{132}$

B $\frac{35}{72}$

C $\frac{7}{12}$

D $\frac{35}{66}$

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. A
2. B
3. C
4. D
5. 0.575
6. D
7. B
8. C
9. A
10. 0.31
11. D
12. B
13. C
14. 0.19
15. A
16. 0.64
17. 0.064
18. B
19. C
20. 0.34
21. A
22. B
23. 0.85
24. A
25. D

© 2026 Brett Robbins. All Rights Reserved.