Name: _____ Period: _____ Date: _____

Theoretical and Experimental Probability Assignment

Solve problems involving Theoretical Probability.

1. What is the probability of drawing a jack in 52 deck of card?

2. What is the probability of getting an even number in tossing a die?

3. What is a probability of drawing a red card in a 52 deck of card?

4. What is the probability of getting a number greater than 4 in tossing a die?

In rolling a pair of dice

5. What is the probability of getting a sum of 6?

6. What is the probability of getting a sum less than 6?

7. What is the probability of getting greater than 10?

8. What is the probability of getting a number less than 5?

Theoretical and Experimental Probability Assignment

In tossing a pair of coin

9. What is the probability of getting both heads?

10. What is the probability of getting a head and a tail?

11. What is the probability of not getting both tails?

There are 5 green balls, 3 blue balls and 2 red balls inside a box.

12. What is the probability of drawing a green ball?

13. What is a probability of a blue ball?

14. What is the probability of not getting a red ball?

Theoretical and Experimental Probability Assignment

From a deck of cards, three cards are drawn at random. What is the probability that:

15. All three are kings?

16. All three spades?

17. All three black?

18. What is the probability of getting a face card?

In tossing 3 coins

19. What is the probability of at least 2 heads?

20. What is the probability of at most 2 tails?

Theoretical and Experimental Probability Assignment

Answer:

Solve problems involving Theoretical Probability.

1. What is the probability of drawing a jack in 52 deck of card?

P (E) = 4/52 or 1/13

2. What is the probability of getting an even number in tossing a die?

P(E) = 3/6 or 1/2

3. What is a probability of drawing a red card in a 52 deck of card?

P (E) = 26/ 52 or 1/2

4. What is the probability of getting a number greater than 4 in tossing a die?

P (E) = 2/6 or 1/3

In rolling a pair of dice

5. What is the probability of getting a sum of 6?

n(S) = 36; n(E) = {(2,4),(4,2),(5,1),(1,5),(3,3)}= 5 , P(E) = 5/36

6. What is the probability of getting a sum less than 6?

n(S) = 36; n(E) = {(1,4),(4,1),(2,3),(3,2),(2,2),(1,2),(2,1),(1,1),(3,1),(1,3)}= 10 , P(E) = 10/36 or 5/18

7. What is the probability of getting greater than 10?

n(S) = 36; n(E) = {(5,6),(6,5),(6,6)}= 3 , P(E) = 3/36 or 1/12

8. What is the probability of getting a number less than 5?

n(S) = 52; n(E) = 16, then P(E) = 16/52 or 4/13

In tossing a pair of coin

9. What is the probability of getting both heads?

n(S) = 4; n(E) = 1, then P(E) = 1/4

10. What is the probability of getting a head and a tail?

n(S) =4; n(E) = 2, then P(E) = 2/4 or 1/2

11. What is the probability of not getting both tails?

n(S) =4; n(E) = 3, then P(E) = 3/4

Theoretical and Experimental Probability Assignment

There are 5 green balls, 3 blue balls and 2 red balls inside a box.

12. What is the probability of drawing a green ball?
n(S)= 10; n(E) = 5, then P(E) = 5/10 or 1/2

13. What is a probability of a blue ball?

n(S) = 10; n(E) = 3, then P(E) = 3/10

14. What is the probability of not getting a red ball?

n(S) = 10; n(E) = 8, then P(E) = 8/10

From a deck of cards, three cards are drawn at random. What is the probability that:

15. All three are king?

n(S) = $_{52}C_3$ =22100
n(E) = $_4C_3$ = 4
P(E) = 4/22100 or 1/5525

16. All three spade?

n(S) = $_{52}C_3$ =22100
n(E) = $_{13}C_3$ = 286
P(E) = 286/22100 or 11/850

17. All three black?

n(S) = $_{52}C_3$ =22100
n(E) = $_{26}C_3$ = 2600
P(E) = 2600/22100 or 2/17

18. What is the probability of getting a face card?

n(S) =52; n(E) = 16, then P(E) = 16/52 or 4/13

In tossing 3 coins

19. What is the probability of at least 2 heads?

n(S) = 8; n(E) = 4, then P(E) = 4/8 or 1/2
20. What is the probability of at most 2 tails?
n(S) = 8; n(E) =6, then P(E) = 6/8 or 3/4