THE GAME OF PIG AFTER DAY 6

PROBABILITY WORKSHEET

Find the probability of each event.

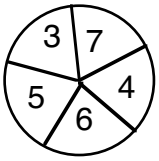
1. Rolling a die and getting a 7. 1. _____

2. Rolling a die and getting a 5 or a 6. 2. _____

3. Picking a spade from a standard deck of cards. 3. _____

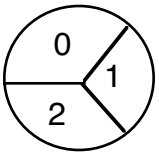
4. Picking a picture card (jack, queen, king) from a standard deck of cards. 4. _____

5. Getting higher than a 4 on the spinner shown at the right.



(Assume that all divisions of the spinner are equal) 5. _____

6. Getting an even number on the spinner shown at the right.



(Assume that all divisions of the spinner are equal) 6. _____

7. Picking a 4 or a heart from a deck of cards. 7. _____

8. Flipping a coin twice and getting tails twice. 8. _____

9. If you flip a coin three times, you can get any of the following results: HHH, HHT, HTH, HTT, THH, THT, TTH, TTT.

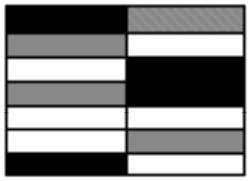
   a. Getting exactly two heads. 9a. _____

   b. Getting at least two heads 9b. _____

   c. Getting at most two heads 9c. _____

   d. Not getting two heads 9d. _____

10. Dropping a dart randomly on the rug at the right and landing on a gray area.



10. _____

The Game of Pig: Probability Quiz after Day 8

Find the probability of each event.

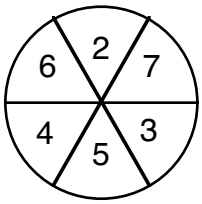
1. Flipping a coin twice and getting tails once. 1. _____

2. Flipping a coin three times and getting heads three times. 2. _____

3. Picking a heart from a standard deck of cards. 3. _____

4. Rolling a die and getting a prime number. 4. _____

5. Getting lower than a 5 on the spinner shown at the right. 5. _____



The Game of Pig: Probability Quiz after Day 8

Find the probability of each event.

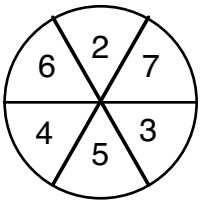
1. Flipping a coin twice and getting tails once. 1. _____

2. Flipping a coin three times and getting heads three times. 2. _____

3. Picking a heart from a standard deck of cards. 3. _____

4. Rolling a die and getting a prime number. 4. _____

5. Getting lower than a 5 on the spinner shown at the right. 5. _____



THE GAME OF PIG

AFTER DAY 12

For each problem, draw a RUG diagram representing.

1. Flipping a coin and tossing a die.

    a. Find P (H, 6)
    b. Find P (T, even)

2. Spinning a red, blue, white spinner with all three parts equal and flipping a coin.

    a. Find P (white, T)
    b. Find P (not white, H)

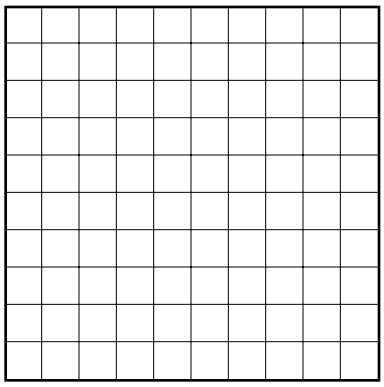
3. Tossing a die and spinning a red, blue, white spinner with all three parts equal.

    a. Find P (odd, red)
    b. Find P (3, not red)
    c. Find P (prime, white)

The Game of Pig: Expected Value Quiz after Day 17

1. A $10 bill, $5 bill, and four $1 bills are placed in a bag. Find the expected value if you are allowed to pull two bills, one bill at a time, without replacing the bill pulled first. Draw a rug and show all your work for finding the expected value.

2. Sure-Shot Sally has 90% accuracy from the free-throw line on her first shot, but only 70% accuracy on her second shot. Draw a rug and show all your work to find her expected value in a one-and-one situation.



THE GAME OF PIG

AFTER DAY 21

For each problem, draw a RUG diagram and a TREE diagram to represent the situation.

1. The result of flipping two coins.

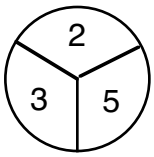
   a. Find P (2 heads)
   b. Find P (1 head, 1 tail)

2. The result of flipping three coins.

   a. Find P (exactly 2 heads)
   b. Find P (exactly one tail)
   c. Find P (at least 2 heads)
   b. Find P (at least one tail)

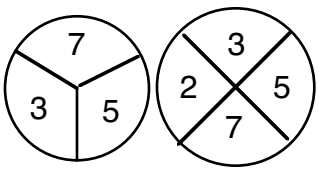
3. Spin the spinner (shown below) twice. Assume that each outcome is equally likely.

   a. Find P (6)
   b. Find P (at least 6)
   c. Find P (at most 6)
   d. Find P (at most 7)



4. Spin each spinner (shown below) once. Assume that each outcome is equally likely.

   a. Find P (odd)
   b. Find P (at least 8)
   c. Find P (8)
   d. Find P (less than 5)



The Game of Pig: In-Class Assessment

CONSIDER THE FOLLOWING GAME.

In each turn of the game, you flip a coin three times.
- If you get three heads, you win 7 points.
- If you get the sequence "head, tail, head," you get 3 points.
- If you get any other sequence, you get no points for that turn.

1. Make a rug or a tree for this game.

2. What is the probability of getting 7 points?

3. What is the probability of getting 3 points?

4. What is the probability of getting 0 points?

5. What is the expected value for this game? Explain your reasoning.