THE GAME OF PIG AFTER DAY 6

PROBABILITY WORKSHEET

Find the probability of each event.

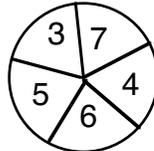1.   Rolling a die and getting a 7.   1. _____

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
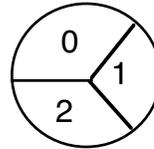   standard deck of cards.   4. _____

5.   Getting higher than   (Assume that all
        a 4 on the spinner   divisions of the
        shown at the right.   spinner are equal)   5. _____

6.   Getting an even   (Assume that all
        number on the spinner   divisions of the
        shown at the right.   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
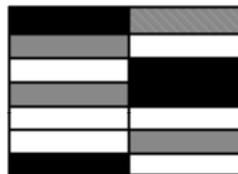   results: HHH, HHT, HTH, HTT, THH, THT, TTH, TTT.

        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
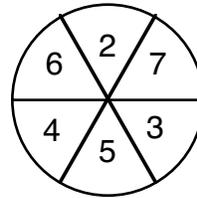   landing on a gray area.   10. _____

The Game of Pig: Probability Quiz after Day 8
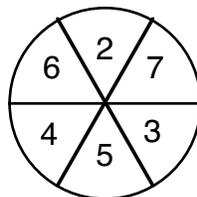
Find the probability of each event.

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

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.
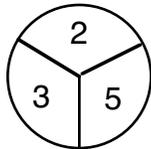
1.   The result of flipping two coins.

        a.   Find P (2 heads)
        b.   Find P (1 head, 1 tail)
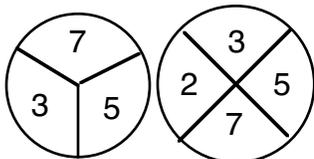
2.   The result of flipping three coins.

        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   a.   Find P (6)
        (shown below)   b.   Find P (at least 6)
        twice. Assume that   c.   Find P (at most 6)
        each outcome is   d.   Find P (at most 7)
        equally likely.

4.   Spin each spinner   a.   Find P (odd)
        (shown below) once.   b.   Find P (at least 8)
        Assume that each   c.   Find P (8)
        outcome is equally   d.   Find P (less than 5)
        likely.

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.