Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Experimental Probability

**Vocabulary:**

Experiment – an activity involving chance in which results are observed

Trial – each observation of an experiment

Outcome – the result of each trial

Probability – measures the likelihood that the event will occur

Sample Space – set of all possible outcomes for an event

**Probability**

**What is the probability of rolling an even number on a standard number cube?**

**Step (1) Find the sample space for a standard number cube**

 **{1, 2, 3, 4, 5, 6} *There are 6 possible outcomes***

**Step (2) Find the number of ways to roll an even number**

 **{2, 4, 6} *The event can occur 3 ways***

**Step (3) Find the probability of rolling an even number**

 **P(even) = number of ways to roll an even number = 3 = 1**

 **Number of faces on a number cube 6 2**

 **\*The probability of rolling an even number is 1/2.**

**1. Find each probability. Write your answer in simplest form.**

**a) Picking a purple marble from a jar with 10 green and 10 purple marbles**

**b) Rolling a number greater than 4 on a standard number cube.**

**2. Find the probability. Write your answer in simplest form.**

**a) Spinning a spinner that has 5 equal sections marked 1 through 5 and landing on an even number.**

**b) Picking a diamond from a standard deck of playing cards which has 13 cards in each of four suits: spades, hearts, diamonds and clubs**

**3. There are 4 aces and 4 kings in a standard deck of 52 cards. You pick one card at random. What is the probability of selecting an ace or a king?**

**4. There are 12 pieces of fruit in a bowl. Seven of the pieces are apples and two are peaches. What is the probability that a randomly selected piece of fruit will not be an apple or a peach?**

**5. What is the probability of pulling a blue marble out of a bag that contains 22 marbles (3 are green, 4 are red, 2 are black, 4 are blue, 3 are white, 2 are yellow, 4 are purple)?**

**6. What is the probability of pulling a joker out of a standard deck of 52 cards?**