NAME _____

Lesson 7.6 Understanding Compound Events

The **Fundamental Counting Principle** states that when an experiment is conducted that is considered a **compound** event, or an event that has more than one element, the number of possible outcomes can be calculated by considering the number of possible outcomes for each element. The number of possible outcomes for the first element (a) can be multiplied by the number of possible outcomes for the second element (b) to find the total number of possible outcomes (o). So, $a \times b = o$.

There are 3 balls (yellow, red, and green) in one bag and 4 balls (purple, blue, white, and black) in another bag. If a person draws one ball from each bag, how many possible outcomes are there?

Step 1: Find the number of outcomes for the first event. 3

Step 2: Find the number of outcomes for the second event. 4

Step 3: Multiply these together. 3×4

Step 4: State the number of possible outcomes for the combined event. 12

Use the Fundamental Counting Principle to find the number of possible outcomes for each compound event described.

	a	b
1.	rolling two dice that are numbered 1–6	flipping a coin and rolling a die numbered 1–6
	_____	_____
2.	spinning a 4-part spinner and flipping a coin	pulling a card from a full deck and flipping a coin
	_____	_____
3.	spinning a 6-part spinner and rolling a die numbered 1–6	flipping a coin and rolling two dice numbered 1–6
	_____	_____
4.	spinning a 4-part spinner and pulling a card from a full deck	flipping 2 coins and rolling 2 dice numbered 1–6
	_____	_____