

Use the Fundamental Counting Principle to find the total number of outcomes in each situation.

1. Haley was trying to decide which salad to order for lunch.

Salad	Dressing
Ham	Vinaigrette
Vegetable	Ginger
Chef	
Fruit	
Caesar	

If each salad comes with 1 dressing, how many different combinations does she have to choose from?

2. A video game lets you choose a characters hair style, hair color and their class. Their choices are listed below.

Hair Style	Hair Color	Class
Short	Red	Warrior
Spiky	Blue	Thief
Long		Mage
Mowhawk		Wizard
Curly		

How many different combinations do you have to choose from?

3. Frank was buying chips and dip for his party. The choices he has are listed below.

Chips	Dip
Triangle	Cheese
Round	Ranch
Square	Salsa
Scoop	Onion

If he gets one type of chip and one type of dip, how many different combinations can he choose from?

4. Rolling two number cubes and tossing one coin.

5. Rolling 3 number cubes and tossing 2 coins.

6. Making a sandwich with ham, turkey, or roast beef; Swiss or provolone cheese; and mustard or mayonnaise.

7. Tossing 4 coins.

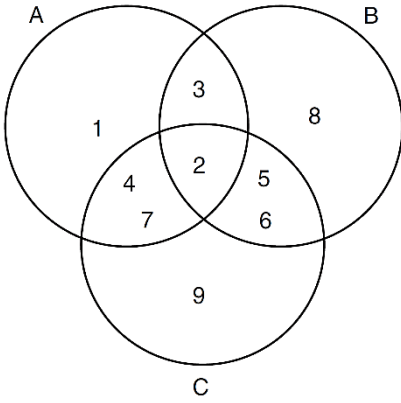
8. Choosing from 3 flavors of juice and 3 sizes.

9. Choosing from 35 flavors of ice cream; one, two, or three scoops; and sugar or waffle cone

10. A license plate that has 3 numbers from 0 to 9 and 2 letters.

11. Choosing a 4-letter password using only vowels

For problems 1-4, list the sample space for each of the following:

<p>1. Tossing a coin:</p>	<p>2. Rolling a six-sided die:</p>
<p>3. Drawing a marble from a bag that contains two red, three blue, and one white marble:</p>	<p>4. A sandwich shop has three types of sandwiches: ham, turkey, and chicken.</p>
<p>5. Given the following sets, find $A \cap B$.</p> <p>$A = \{1,3,5,7,9,11,13,15\}$ $B = \{0,3,6,9,12,15\}$</p>	<p>6. Given the following sets, find $A \cup B$.</p> <p>$A = \{1,3,5,7,9,11,13,15\}$ $B = \{0,3,6,9,12,15\}$</p>
<p>7. Find the intersection of A and B.</p> <p>$A = \{1,2,3,4,5,6,7,8\}$ $B = \{2,4,6,8,10,12\}$</p>	<p>8. Find $M \cup N$.</p> <p>$M = \{\text{Green, red, yellow, black}\}$ $N = \{\text{blue, green, yellow}\}$</p>
<p>9. What is $A \cup B$?</p> <p>$A = \{2,4,5,7,8\}$ $B = \{3,5,8,9\}$</p>	<p>10. What is $R \cap P$?</p> <p>$R = \{1,2,3,4\}$ $A = \{0,2,4,6\}$ $P = \{1,3,5,7\}$</p>
<p>11. What set represent the intersection of sets A, B, and C?</p> 	<p>12. What is the intersection of sets Q, W, and Z?</p> <p>$Q = \{0,2,4,6\}$ $W = \{0,1,2,3\}$ $Z = \{1,2,3,4\}$</p>

Find the number of possible outcomes in the sample space.

13. A jewelry store sells gold and platinum rings. Each ring is fitted with a ruby, sapphire, emerald, or diamond gemstone.

14. A spinner can land on either red, blue, or green. You spin twice.