

Lesson Summary

To find the percent of possible outcomes for a counting problem you need to determine the total number of possible outcomes and the different favorable outcomes. The representation

$$\text{Quantity} = \text{Percent} \times \text{Whole}$$

can be used where the quantity is the number of different favorable outcomes and the whole is the total number of possible outcomes.

Problem Set

- A six-sided die (singular for dice) is thrown twice. The different rolls are as follows:
 1 and 1, 1 and 2, 1 and 3, 1 and 4, 1 and 5, 1 and 6,
 2 and 1, 2 and 2, 2 and 3, 2 and 4, 2 and 5, 2 and 6,
 3 and 1, 3 and 2, 3 and 3, 3 and 4, 3 and 5, 3 and 6,
 4 and 1, 4 and 2, 4 and 3, 4 and 4, 4 and 5, 4 and 6,
 5 and 1, 5 and 2, 5 and 3, 5 and 4, 5 and 5, 5 and 6,
 6 and 1, 6 and 2, 6 and 3, 6 and 4, 6 and 5, 6 and 6.
 - What is the percent that both throws will be even numbers?
 - What is the percent that the second throw is a 5?
 - What is the percent that the first throw is lower than a 6?
- You have the ability to choose three of your own classes, art, language, and physical education. There are three art classes (A1, A2, A3), two language classes (L1, L2), and two P.E. classes (P1, P2) to choose from. The order does not matter and you must choose one from each subject.

A1, L1, P1	A2, L1, P1	A3, L1, P1
A1, L1, P2	A2, L1, P2	A3, L1, P2
A1, L2, P1	A2, L2, P1	A3, L2, P1
A1, L2, P2	A2, L2, P2	A3, L2, P2

Compare the percent of possibilities with A1 in your schedule to the percent of possibilities with L1 in your schedule.

3. Fridays are selected to show your school pride. The colors of your school are orange, blue, and white, and you can show your spirit by wearing a top, a bottom, and an accessory with the colors of your school. During lunch, 11 students are chosen to play for a prize on stage. The table charts what the students wore.

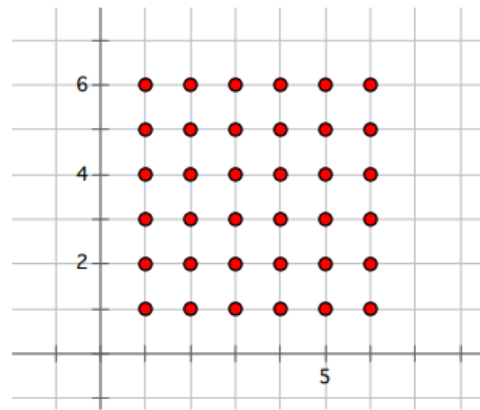
Top	W	O	W	O	B	W	B	B	W	W	W
Bottom	B	O	B	B	O	B	B	B	O	W	B
Accessory	W	O	B	W	B	O	B	W	O	O	O

- What is the percent of outfits that are one color?
 - What is the percent of outfits that include orange accessories?
4. Shana wears two rings (G represents gold, and S represents silver) at all times on her hand. She likes fiddling with them and places them on different fingers (pinky, ring, middle, index) when she gets restless. The chart is tracking the movement of her rings.

	Pinky Finger	Ring Finger	Middle Finger	Index Finger
Position 1		G	S	
Position 2			S	G
Position 3	G		S	
Position 4				S,G
Position 5	S	G		
Position 6	G	S		
Position 7	S		G	
Position 8	G		S	
Position 9		S,G		
Position 10		G	S	
Position 11			G	S
Position 12		S		G
Position 13	S,G			
Position 14			S,G	

- What percent of the positions shows the gold ring on her pinky finger?
- What percent of the positions shows both rings on the same finger?

5. Use the coordinate plane below to answer the following questions.



- a. What is the percent of the 36 points whose quotient of $\frac{x\text{-coordinate}}{y\text{-coordinate}}$ is greater than one?
- b. What is the percent of the 36 points whose coordinate quotient is equal to one?