

By the end of this lesson you will be able to _____.

What is Probability? _____.

Probability can be represented in three ways:

- 1) _____
 - a. What value would represent an impossible situation? _____
 - b. What value would represent a certain to occur situation? _____
 - c. What value would represent a situation as likely as not to occur? _____

- 2) _____
 - a. What value would represent an impossible situation? _____
 - b. What value would represent a certain to occur situation? _____
 - c. What value would represent a situation as likely as not to occur? _____

- 3) _____
 - a. What value would represent an impossible situation? _____
 - b. What value would represent a certain to occur situation? _____
 - c. What value would represent a situation as likely as not to occur? _____

Example 1: The Shell Game

What is the theoretical probability that you can choose the correct shell with the ball underneath?



What is the Ratio for probability = _____

How many favorable outcomes are there in the shell game? _____

How many total outcomes are there in the game? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

Let's add a few more shells and balls to the game.

How many favorable outcomes are there in the shell game? _____

How many total outcomes are there in the game? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

Example 2: Pick a Card



What is the theoretical probability that you can pick...

A Red Card?

How many red cards are in a standard deck? _____

How many cards are in a standard deck? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

A Black Card?

How many black cards are in a standard deck? _____

How many cards are in a standard deck? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

A Spade?

How many cards with a spade suit are in a standard deck? _____

How many cards are in a standard deck? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

Would the probability change if you were asked for a diamond card? Explain your answer.

A Heart or Face card?

How many heart or face cards are in a standard deck? _____

How many cards are in a standard deck? _____

What is the probability as a fraction? _____ Decimal? _____ Percent? _____

Your Turn to Practice. [Fill in each problem using the information from the video]

Find the theoretical probability for each event below. Write as a fraction, decimal, and percent.

- 1) Rolling a 6-sided die and having it land on _____.

- 2) Choosing the vegetable _____ or _____, from the choices of potato, carrots, green beans, or corn.

- 3) Getting the _____ gumball from a box of _____ green, _____ blue, _____ white, and _____ red gumballs.

- 4) Choosing a boy from a class of _____ students with _____ girls.