

# 15.2 Probability

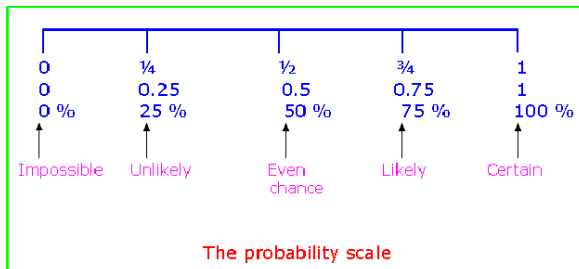
## Learning Target:

- I can understand the concept of probability and the relationship between probability and likelihood.
- I can find probabilities of events.

### Key Ideas:

Probability: of an \_\_\_\_\_ is a \_\_\_\_\_ that measures the \_\_\_\_\_ that the event will occur.

Probabilities are between \_\_\_\_ and \_\_\_\_, \_\_\_\_\_ 0 and 1.



\*probabilities can be written as fractions, decimals, or percents

## Do Now

- Is rolling an even number on a number cube an outcome or an event? Explain.



- Describe how an outcome and a favorable outcome are different.

## Describing the Likelihood of an Event



There is an 80% chance of thunderstorms tomorrow. Describe the likelihood of the event.

### Practice:

Describe the likelihood of the event given its probability.

- The likelihood that you land a jump on a snowboard is  $\frac{1}{2}$ .
- There is a 100% chance that the temperature will be less than 120°F tomorrow.

## Finding the Probability of An Event

When all possible \_\_\_\_\_ are equally \_\_\_\_\_, the \_\_\_\_\_ of the \_\_\_\_\_ is the ratio of the number of \_\_\_\_\_ to the number of \_\_\_\_\_.

the probability of an event is written as **P(event)**.

$$P(\text{event}) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

*Practice:*

3) What is the probability of rolling a number greater than 2?

4) What is the probability of rolling a 7?



## Using Probability

The probability that you randomly draw a short straw from a group of 40 straws is  $\frac{3}{20}$ . How many are short straws?

- (A) 4                      (B) 6  
(C) 15                    (D) 34



*Practice:*

5) The probability that you randomly draw a short straw from a group of 75 straws is \_\_\_\_\_. How many are short straws?