

NAME: \_\_\_\_\_

Div: \_\_\_\_\_

DATE: \_\_\_\_\_



## Quick Review

When the outcomes of an experiment are equally likely, the probability of an event occurring is:

$$\frac{\text{Number of outcomes favourable to that event}}{\text{Total number of outcomes}}$$

George has 15 bottles of flavoured water in the fridge. He has 7 bottles of lemon, 3 bottles of orange, and 5 bottles of raspberry. George takes a bottle without looking.

The probability that George takes a particular flavour of water can be expressed as a fraction, ratio, or percent.

The number of possible outcomes is 15.

- For the probability that George takes orange:  
The number of favourable outcomes is 3.  
As a fraction, the probability is:  $\frac{3}{15} = \frac{1}{5}$   
As a ratio, the probability is: 1:5  
As a percent, the probability is:  $\frac{3}{15} = \frac{1}{5} = \frac{20}{100} = 20\%$
- The probability that George takes a lime-flavoured water is 0, or 0% because there is no lime-flavoured water in the fridge. This is an **impossible event**.
- The probability that George takes a bottle that contains water is 1, or 100% because every bottle contains water. This is a **certain event**.
- All possible probabilities lie between 0 and 1.

**Tip**

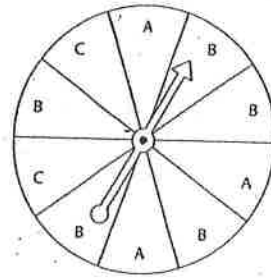
"Probability" is another name for "theoretical probability."

## Practice

1. Suppose the pointer on this spinner is spun.

a) What is the total number of sectors on which the pointer could land? \_\_\_\_\_

b) Use a fraction, a ratio, and a percent to describe the probability of each event.



i) The pointer will land on A.

As a fraction:  $\frac{\quad}{10}$  As a ratio: \_\_\_\_\_ :10 As a percent: \_\_\_\_\_

ii) The pointer will land on B.

As a fraction: \_\_\_\_\_ As a ratio: \_\_\_\_\_ As a percent: \_\_\_\_\_

iii) The pointer will land on a number.

As a fraction: \_\_\_\_\_ As a ratio: \_\_\_\_\_ As a percent: \_\_\_\_\_

iv) The pointer will land on a letter.

As a fraction: \_\_\_\_\_ As a ratio: \_\_\_\_\_ As a percent: \_\_\_\_\_

v) The pointer will *not* land on C.

As a fraction: \_\_\_\_\_ As a ratio: \_\_\_\_\_ As a percent: \_\_\_\_\_

2. Gordon has some gumballs in a bag.

He has 7 red, 5 green, 2 yellow, 4 orange, 1 black, and 6 purple gum balls. Gordon reaches into the bag without looking and pulls out a gumball.

a) What is the total number of possible outcomes? \_\_\_\_\_

b) Write a fraction, a ratio, and a percent to describe the probability of Gordon picking each gumball listed below.

	Fraction	Ratio	Percent
purple			
black			
pink			
red or yellow			