

# Fractions Review

## What Are Fractions?

- Fractions are a way of expressing parts of a whole
- The denominator (number on the bottom) tells you how many pieces the whole is divided into
- The numerator (number on the top) tells you how many of these pieces you have

## Adding and Subtracting Fractions

- To add or subtract fractions, you need to make sure you are adding and subtracting pieces of the same size. Use equivalent fractions to express your fractions as pieces of the same size.
- To add or subtract mixed numbers, change them into an improper fraction first

## Multiplying Fractions

- When multiplying fractions, we use the word “of” to describe the multiplication. For example,  $\frac{3}{4} \times \frac{1}{2}$  could mean either “three fourths of one half” or “one half of three fourths”.
- A shortcut you can use with numbers is to multiply the numerators together, multiply the denominators together, and then simplify.

## Dividing Fractions

- When dividing fractions, we think about dividing the first number into “groups of” the second number. The answer is how many groups there are. For example, the division  $\frac{2}{3} \div \frac{1}{6}$  means “how many groups of one sixth fit into two thirds?”. The answer is four, because there are two sixths in each third, so there are four sixths in two thirds.
- A shortcut you can use with numbers is to multiply by the reciprocal of the fraction you are dividing by.