## EQUIVALENT FRACTIONS

## What Are Equivalent Fractions?

- Equivalent fractions represent the same ratio between two values.
- Fractions show a ratio between two values. The fraction $1 / 2$ represents 1 out of 2 . If there were 2 students sharing an assignment, each would do part of the work. The work would be divided into 2 equal parts and each student would do 1 part or $1 / 2$ the total project.
- The fraction $1 / 2$ also represents part of a set. If there are 2 cookies in a set and one is eaten, then 1 out of 2 cookies is eaten. The relationship between the cookie eaten and the total number of cookies is 1 out of 2

- Like $1 / 2$, the number 1 has a multitude of equivalents: $2 / 2,4 / 4,10 / 10$, $50 / 50$. Whenever the numerator and denominator are the same numbers, the fraction is equivalent to one.


$$
\begin{gathered}
1 \times 5=5 \\
3 / 3 \times 1 / 2=3 / 6
\end{gathered}
$$

$$
6 / 6 \times 1 / 2=6 / 12
$$

## How to calculate an equivalent fraction:

- To calculate an equivalent fraction, multiply the fraction by 1 or one of its equivalent fractions. Choose a number that when multiplied by the denominator will produce a sum that helps you solve a problem.
- For example:

$$
\begin{gathered}
1 / 5=n / 25 \\
1 / 5 \times 5 / 5=5 / 25 \\
n=5
\end{gathered}
$$



## $6 / 15+7 / 15=13 / 15$

- Changing the denominator of $2 / 5$ to 15 allows us to add the two fractions. This is accomplished by multiply $2 / 5 \times 1$ which equals 2/5, but using 3/3 (an equivalent of 1). Any fraction can be changed to an equivalent by multiplying times a fraction equivalent to 1.


## Try This!

1. What is an equivalent fraction for $4 / 5$ ?
$\square$
2. What is the numerator for this equivalent fraction?
$5 / 8=n / 40$

- 

$\qquad$
3.
 72

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