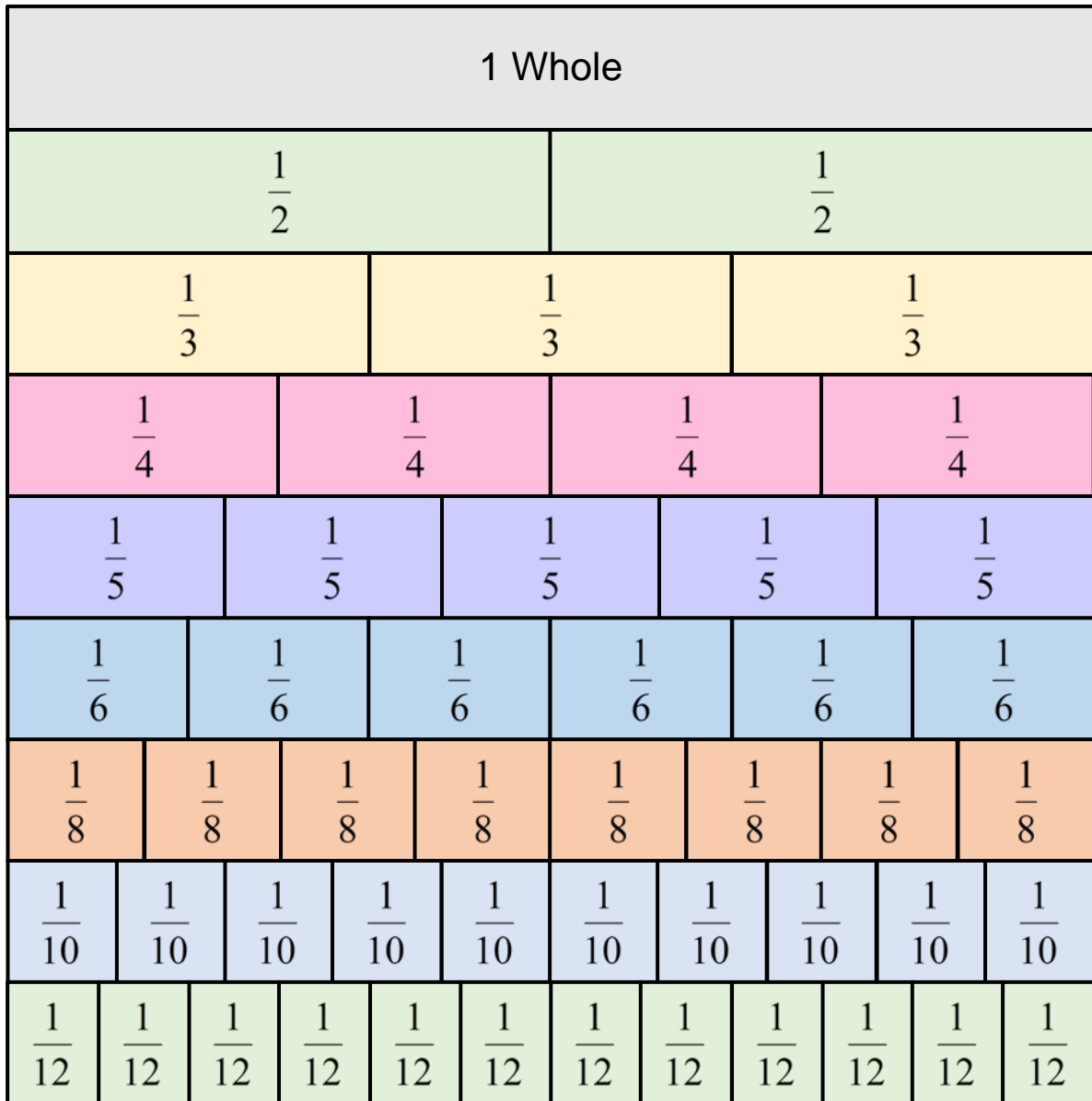# EQUIVALENT FRACTIONS

Unit Overview
In this unit, you will examine equivalent fractions using fraction strips. You will learn how to find equivalent forms of fractions using fractions equal to one. You will compare and order fractions using symbols and a number line.

Fraction Strips

1 Whole											

1/2	1/2

1/3	1/3	1/3

1/4	1/4	1/4	1/4

1/5	1/5	1/5	1/5	1/5

1/6	1/6	1/6	1/6	1/6	1/6

1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8

1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10

1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12

Click on the link to watch the video "Comparing fractions visually with a bar".

Equivalent Fractions

Equivalent fractions have the same value, even though they may look different.

These fractions are really the same: $\dfrac{1}{2} = \dfrac{2}{4} = \dfrac{4}{8}$

Why are they the same? Because when you multiply or divide **both** the top and bottom by the same number, the fraction keeps its value.
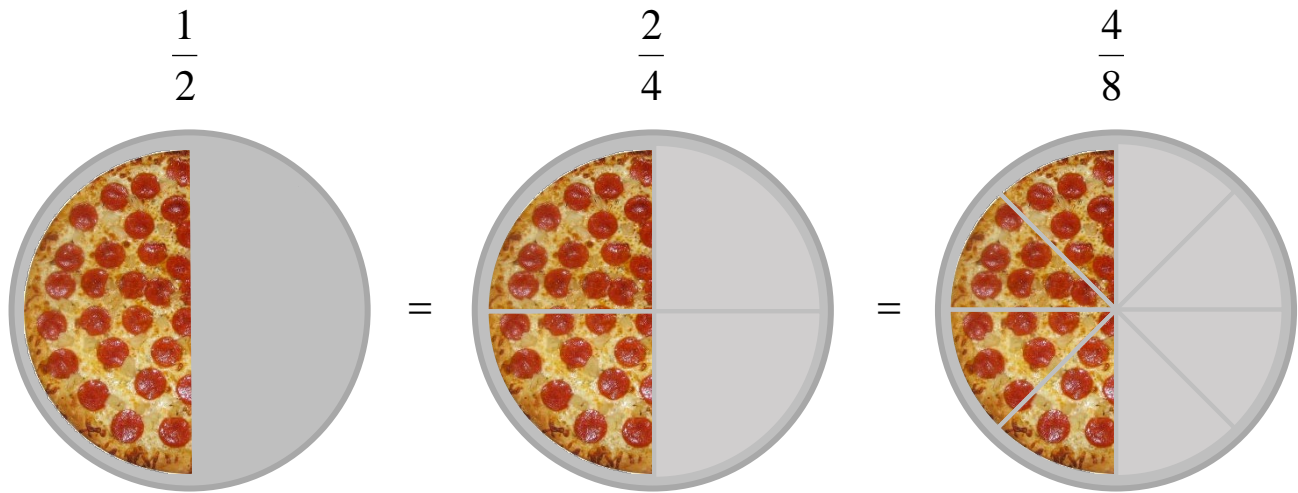
The rule to remember is:

> "Change the bottom using multiplication or division.
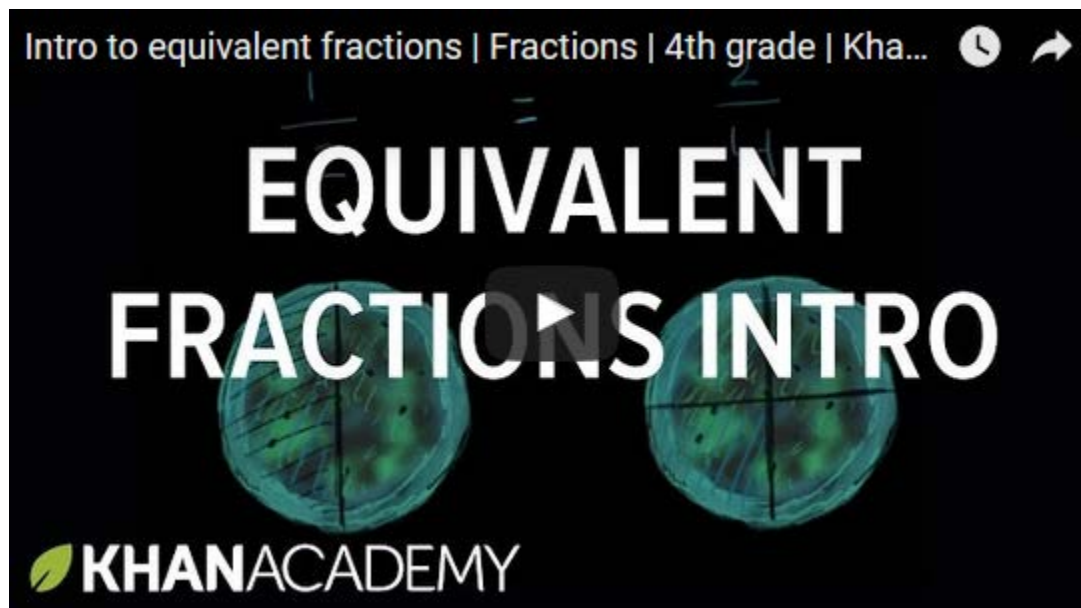>
> And the same to the top must be applied."

Multiplying

Here is why those fractions are really the same:

$$\times 2 \qquad \times 2$$

$$\dfrac{1}{2} = \dfrac{2}{4} = \dfrac{4}{8}$$

$$\times 2 \qquad \times 2$$

And visually it looks like this:

$$\frac{1}{2}$$ $$\frac{2}{4}$$ $$\frac{4}{8}$$

$=$ $=$

Click on the link to watch the video "Intro to equivalent fractions".

Dividing

Here are some more equivalent fractions, this time by dividing:

$$\div 3 \qquad \div 6$$

$$\frac{18}{36} = \frac{6}{12} = \frac{1}{2}$$

$$\div 3 \qquad \div 6$$

Choose the number you divide by carefully, so that the results (both top and bottom) stay **whole numbers**.

If we keep dividing until we can't go any further, then we have simplified the fraction (made it as simple as possible).

Summary

- You can make equivalent fractions by multiplying or dividing **both top and bottom** by the same amount.

- You only multiply or divide, **never add or subtract**, to get an equivalent fraction.

- Only divide when the top and bottom stay as whole numbers.