

FRACTIONS AND MIXED NUMBERS



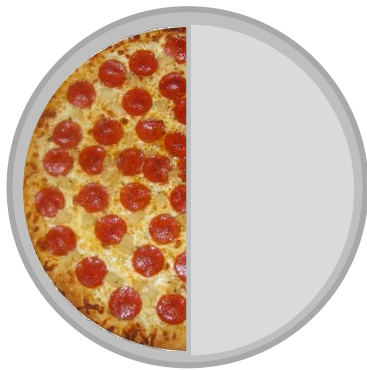
Unit Overview

In this unit, you will be introduced to fractions. First, you will look at fractions which are parts of a whole. You will then explore mixed numbers which are a combination of whole numbers and fractions.

Fractions

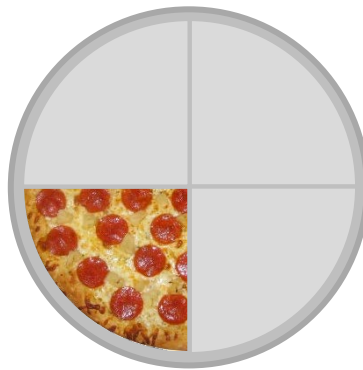
A fraction is a part of a whole.

Slice a pizza, and we get fractions:



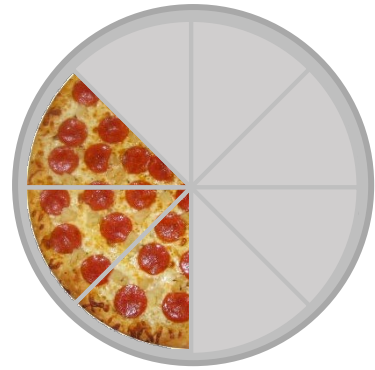
$$\frac{1}{2}$$

(One-Half)



$$\frac{1}{4}$$

(One-Quarter)



$$\frac{3}{8}$$

(Three-Eighths)

The top number says how many slices we **have**.

The bottom number says how many equal slices it was **cut into**.

Numerator and Denominator

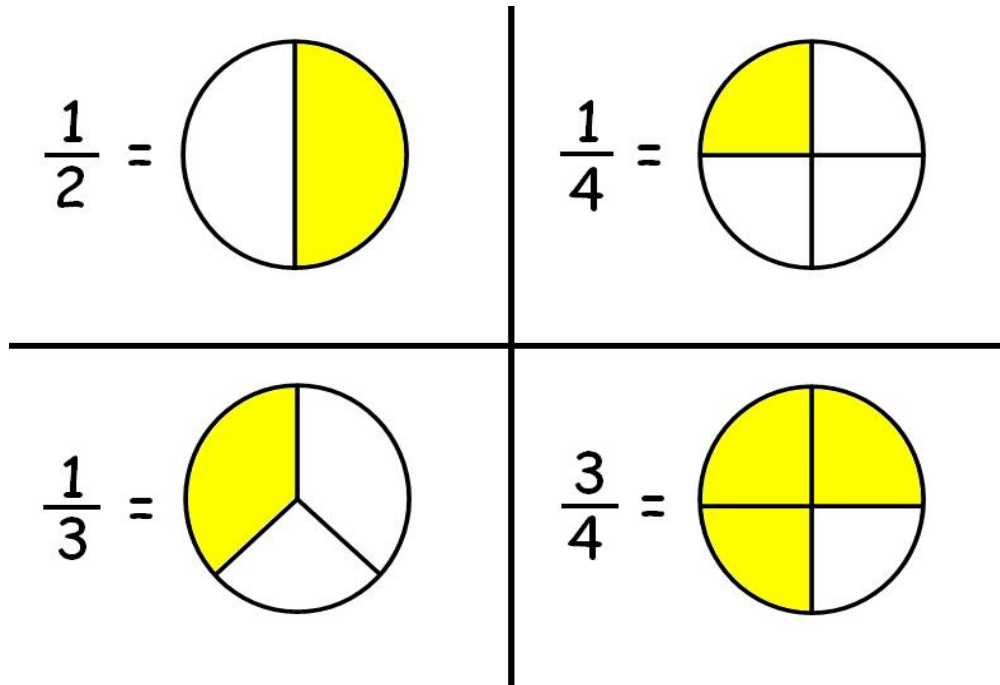
We call the top number the **Numerator**. It is the number of parts we have.

We call the bottom number the **Denominator**. It is the number of parts the whole is divided into.

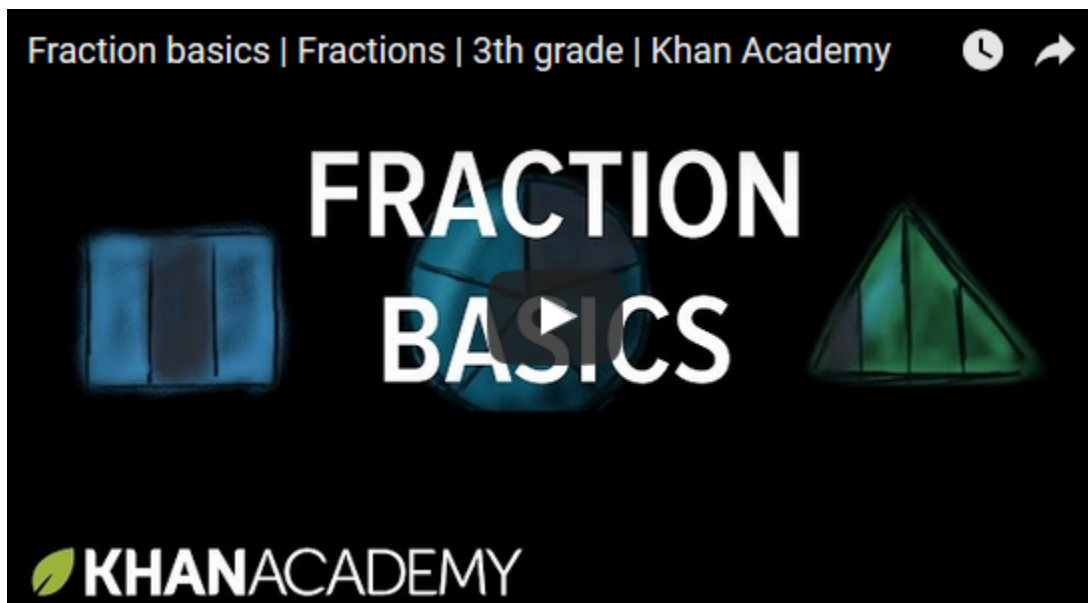
Numerator
Denominator

You just have to remember those names!

(If you forget just think "Down"-ominator)



Click on the link to watch the video "[Fraction basics](#)".



Mixed Numbers

A Mixed Fraction is a whole number and a proper fraction combined.

Such as $1 \frac{3}{4}$

(Also called "*Mixed Numbers*")



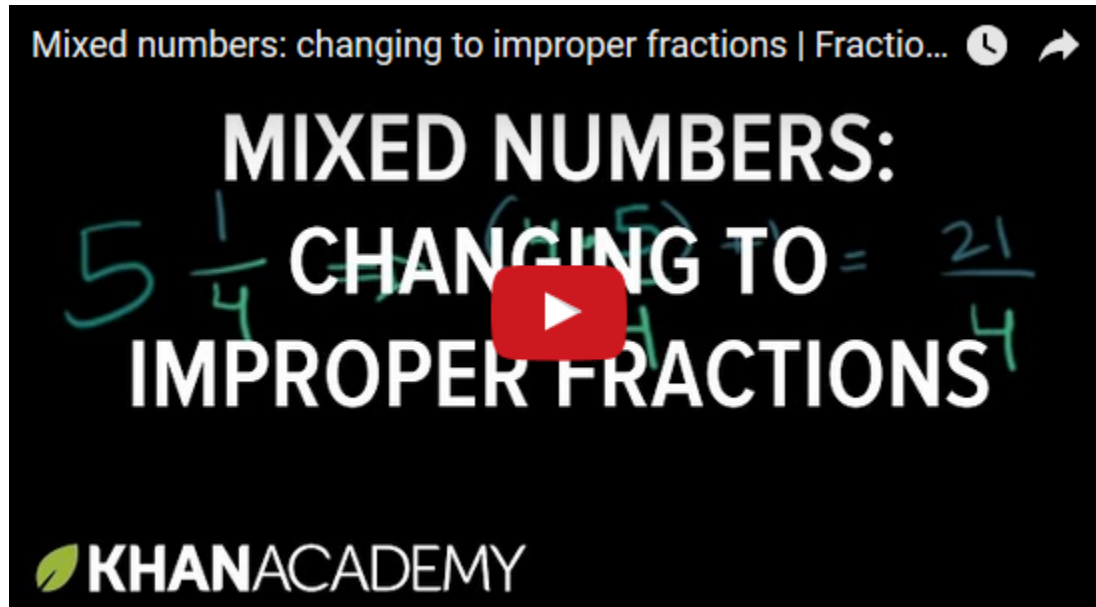
$1 \frac{3}{4}$

(one and three-quarters)

We can give names to every part of a mixed fraction:

Whole Number 2 Numerator 1
Denominator 3

Click on the link to watch the video "[Mixed numbers: changing to improper fractions](#)".



Improper Fractions

A fraction with a larger number on the top and a smaller number on the bottom is called an **improper fraction**.

Improper Fractions

Fractions always need a small numerator and a larger denominator. To fix this problem, you will divide this improper fraction and make it a mixed number. Think of the fraction line as a division sign.

Example: The fraction $12/5$ really means $12 \div 5$

To make a mixed number you will divide.

Instead of writing remainder 2 in the quotient, you need to make the 2 into a fraction by placing it on top of the divisor. The 2 is the whole number and the $2/5$ is the fraction.

$$\begin{array}{r} \text{DIVISOR} \rightarrow 5 \overline{)12} \\ \underline{-10} \\ 2 \end{array} \quad \begin{array}{l} \text{REMAINDER OVER THE DIVISOR} \rightarrow 2 \frac{2}{5} \\ \text{The whole number} \\ \text{and the fraction is} \\ \text{the mixed number.} \end{array}$$

$$12/5 = 2 \frac{2}{5}$$

This is the way that you change an improper fraction into a mixed number.

Click on the link to watch the video "[Mixed numbers: changing from an improper fraction](#)".

