▶**The Numerator and the Denominator**

Vocabulary
numerator denominator

What do the different parts of a fraction mean?

The two parts of a fraction are the **numerator** and the **denominator** . The numerator is the number on top, and the denominator is the number down below. Each number tells a different part of the fraction. Here is an easy way to remember the difference between the two words:

$\frac{1}{3}$

The **numerator** is the **n**umber on top.

The **denominator** is the number **d**own below.
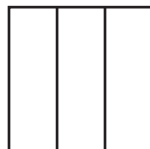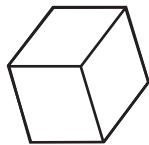
The Denominator

The denominator (the number down below) tells the total number of parts in the fraction.

How many total parts are in the fraction $\frac{1}{3}$?

$\frac{1}{3}$ ← denominator

The total number of parts is 3.

Let's look at these shapes. They are divided into thirds. Each has three total parts. Each shows "fair shares."
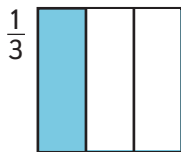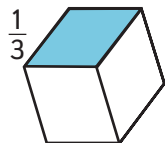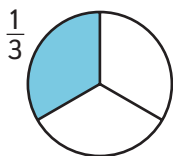
The Numerator

The numerator (the number on top) tells us the number of parts in the whole fraction.

Let's look at the fraction $\frac{1}{3}$.

$\frac{1}{3}$ ← numerator
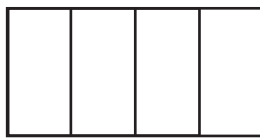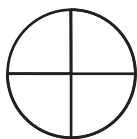
The numerator is 1, which means we have 1 part.

$\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$

The shaded part in each figure tells how many parts of the whole we have. Each of these shapes represents the fraction $\frac{1}{3}$.

Example 1

Find the total parts of the fraction. Then tell the parts of the whole fraction.

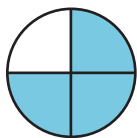$\frac{3}{4}$ — numerator, denominator

Look at the denominator (the number down below).

There are 4 total parts.

Find the parts of the whole fraction.
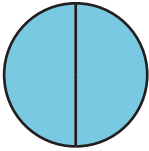
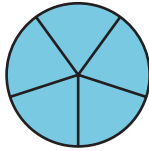Look at the numerator (the number on top).

There are 3 parts.

How do we write a whole number as a fraction?

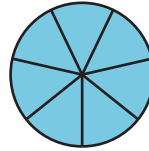When we shade all the parts of a shape, we have a fraction equal to one.
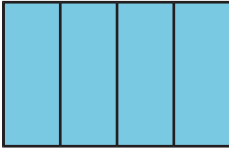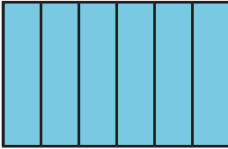
$\frac{2}{2}$ 　　$\frac{5}{5}$ 　　$\frac{7}{7}$

Example 1

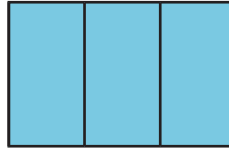Draw a rectangle to match the fractions $\frac{4}{4}$, $\frac{6}{6}$, and $\frac{3}{3}$.

$\frac{4}{4}$ 　　$\frac{6}{6}$ 　　$\frac{3}{3}$

Apply Skills
Turn to *Interactive Text*,
page 14.

Monitoring Progress
Quiz 1

mBook Reinforce Understanding
Use the *mBook Study Guide*
to review lesson concepts.

Homework

Activity 1

Draw the shape on your paper and use shading to show the fraction.

Model   Show $\frac{2}{3}$ using a rectangle.
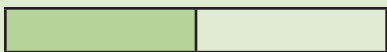
Answer:

1.   Show $\frac{1}{4}$ using a circle.

2.   Show $\frac{1}{2}$ using a triangle.

3.   Show $\frac{7}{8}$ using a square.
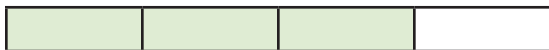
4.   Show $\frac{3}{3}$ using a rectangle.

Activity 2

Tell what fraction is represented by the shaded part of the pictures. Then answer the question about the fraction.

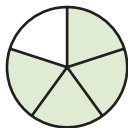**Model**   What is the fraction? What is the denominator?

Answer: The fraction is $\frac{1}{2}$. The denominator is 2.

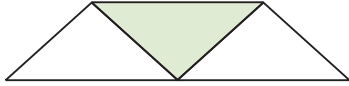1.   What is the fraction? What is the numerator?

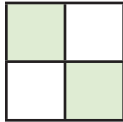2.   What is the fraction? What are the total parts?

3. What is the fraction? What is the denominator?

4. What is the fraction? What are the "parts we have"?

Activity 3 • Distributed Practice

Solve.

1. $\begin{array}{r} 4{,}007 \\ -\,2{,}129 \\ \hline \end{array}$

2. $\begin{array}{r} 500 \\ +\,700 \\ \hline \end{array}$

3. $\begin{array}{r} 37 \\ \times\,42 \\ \hline \end{array}$

4. $\begin{array}{r} 800 \\ \times\ \ \ 3 \\ \hline \end{array}$

5. $6\overline{)345}$