Fractions of a Whole

Quick Review

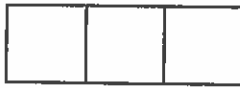*At Home At School*

➤ Fractions describe equal parts of a whole.

3 equal parts
are thirds.
$\frac{1}{3}$ is shaded.

5 equal parts
are fifths.
$\frac{4}{5}$ are shaded.

8 equal parts are eighths.
$\frac{5}{8}$ are shaded.

The **denominator** tells
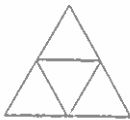how many equal parts
are in 1 whole.

$$\frac{5}{8}$$

The **numerator** tells
how many equal parts
are counted.

➤ A proper fraction represents an amount less than 1 whole.
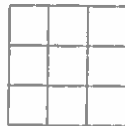$\frac{5}{8}$ is a proper fraction.

Try These

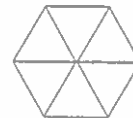1. Write a fraction to tell what part of each figure is shaded.

   a)   b)   c)

   _____   _____   _____
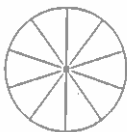
2. Colour some of the equal parts of each figure.
   Write a fraction to describe the coloured parts.

   a)

   _____
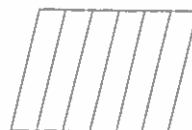
   b)   c)

   _____   _____

Play this game with a partner.
You will need:
2 number cubes
2 pencil crayons or crayons of different colours

Take turns making fractions.
➤ Roll the number cubes. Use the greater number as the denominator.
➤ Find a figure on the game board that can be used to show your fraction.
   Colour the figure. Write the fraction.
➤ If there is no figure that can be used, you lose your turn.
➤ Keep playing until all the figures are coloured.
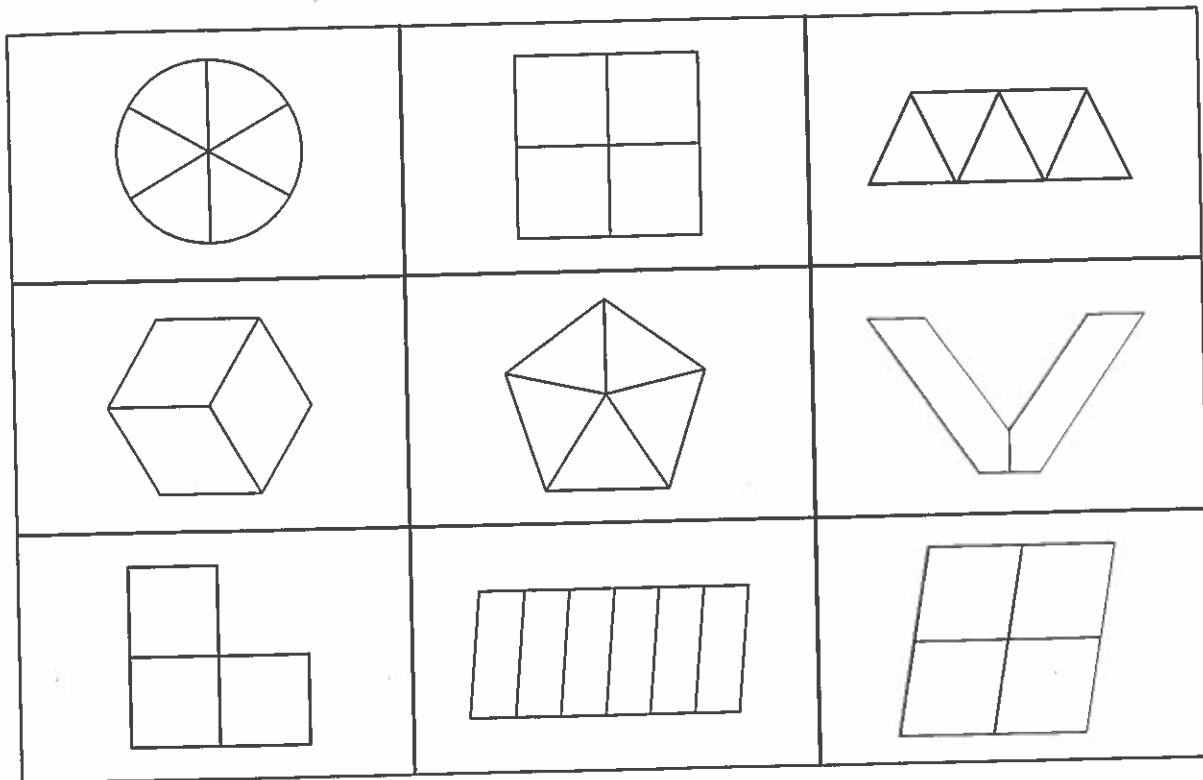
Stretch Your Thinking

This figure represents $\frac{3}{5}$ of one whole.
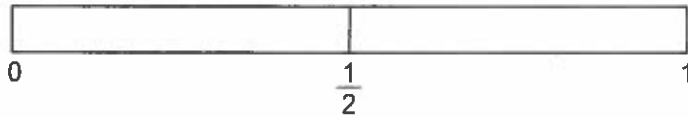Show what the whole might look like.
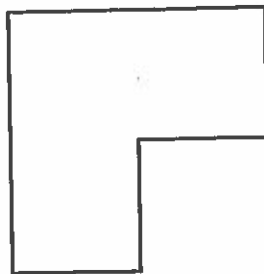
Fraction Benchmarks

At Home
At School

Quick Review

You can use the benchmarks of $0, \frac{1}{2},$ and 1 to tell about how big a fraction is.

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

$\frac{7}{8}$ is closer to 1.

$\frac{5}{12}$ is closer to $\frac{1}{2}$.
It is a little less than $\frac{1}{2}$.
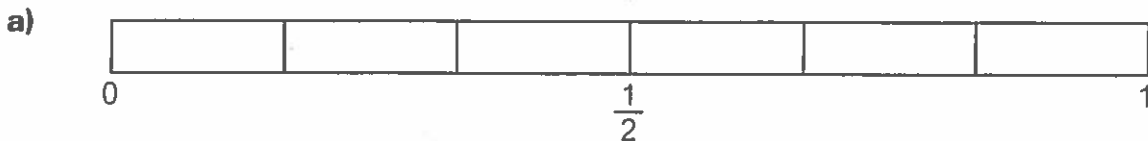
$\frac{2}{12}$ is closer to 0.

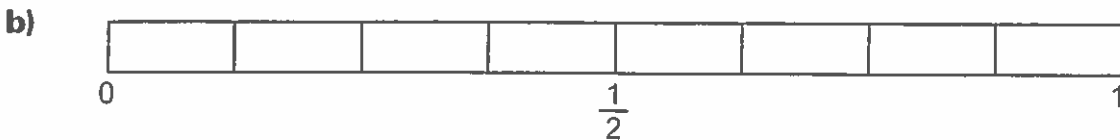## Try These

1. Colour each strip to show a fraction.
   Write whether the fraction is closer to $0, \frac{1}{2},$ or 1.

   a)

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

   Closer to _____

   b)

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

   Closer to _____

2. A trashcan is not quite full. Write a fraction that might tell how full it is.

Play this game with a partner.

You will need:
Index cards with these fractions written on them:

$\frac{1}{3}, \frac{2}{3}, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{1}{6}, \frac{2}{6}, \frac{4}{6}, \frac{5}{6}, \frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{5}{8}, \frac{6}{8}, \frac{7}{8}, \frac{1}{12}, \frac{2}{12}, \frac{4}{12}, \frac{5}{12}, \frac{7}{12}, \frac{8}{12}, \frac{10}{12}, \frac{11}{12}$
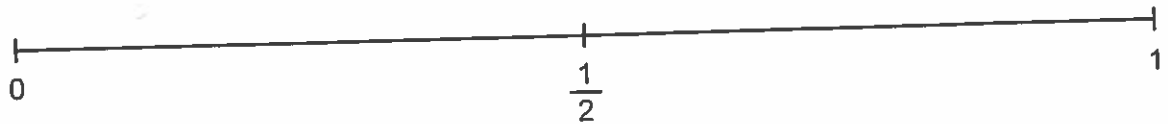
A paper bag
Strips of paper 15 cm long
Crayons

Put the fraction cards in the bag.
Take turns.
➤ Draw a card from the bag.
➤ Estimate whether the fraction is closer to $0, \frac{1}{2}$, or 1.
➤ Fold and colour a paper strip to show the fraction.
➤ Line up your strip with this number line to check your estimate.

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├───────────────────────────┼───────────────────────────┤
0                          1                          1
                           ─
                           2
```

➤ You get a point if your estimate was right.
➤ Your partner gets a point if your estimate was wrong.
➤ Keep playing until one player has 10 points.

Stretch Your Thinking ·

1. Name a fraction between 0 and $\frac{1}{2}$ that is neither closer to 0 nor closer to $\frac{1}{2}$.
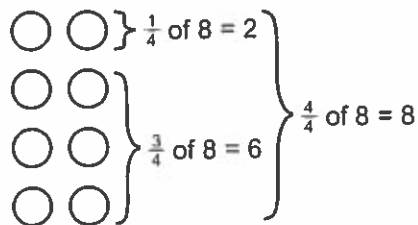
   _____

2. Name a fraction that is between $\frac{1}{2}$ and 1 that is neither closer to $\frac{1}{2}$ nor closer to 1.
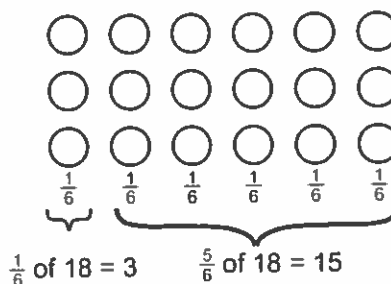
   _____

Fractions of a Set

Quick Review

You can use fractions to show equal parts of a set.

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

$\frac{3}{4}$ of 8 = 6

$\frac{4}{4}$ of 8 = 8

Here is a way to find $\frac{5}{6}$ of 18.

The denominator lets us know we are counting sixths. Divide 18 counters into 6 equal groups to show sixths.

$\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$ $\frac{1}{6}$

$\frac{1}{6}$ of 18 = 3 $\frac{5}{6}$ of 18 = 15

Try These

Draw a picture to show the fraction of each set.

$\frac{1}{2}$ of 10 = _____	$\frac{2}{3}$ of 9 = _____
$\frac{4}{5}$ of 15 = _____	$\frac{1}{4}$ of 12 = _____

1. Write a fraction for the shaded part of each set.

   a)
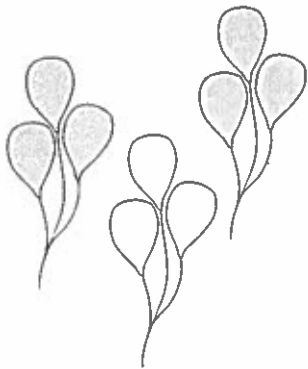
   b)

   c)

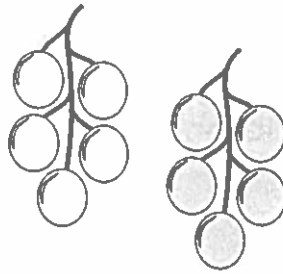   _____   _____   _____
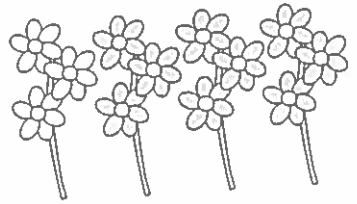
2. Use counters to find the fraction of each set.

   a) $\frac{1}{2}$ of 14 = _____   b) $\frac{2}{6}$ of 18 = _____   c) $\frac{3}{5}$ of 15 = _____

   d) $\frac{3}{8}$ of 16 = _____   e) $\frac{3}{4}$ of 12 = _____   f) $\frac{6}{10}$ of 20 = _____

   g) $\frac{7}{7}$ of 14 = _____   h) $\frac{7}{8}$ of 24 = _____   I) $\frac{2}{3}$ of 15 = _____

3. On Pet Day, 18 children brought a pet to school.
   Two thirds of the pets were dogs. One ninth of the pets were cats.

   a) How many dogs were there? _____

   b) How many cats were there? _____

   c) How many animals were neither dogs nor cats? _____

Stretch Your Thinking

1. Choose letters from the box.

   a) Write a word that uses $\frac{1}{2}$ of the letters.

   _____

   b) Write a word that uses $\frac{3}{5}$ of the letters.

   _____

   A I T
   M U L
       R
   O E S

Different Names for Fractions

At Home
At School

Quick Review

Equivalent fractions are fractions that name the same amount.

1 Whole					
$\frac{1}{2}$			$\frac{1}{2}$		
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

$\frac{1}{2}$ and $\frac{3}{6}$ are equivalent fractions.

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

$\frac{3}{4}$ and $\frac{6}{8}$ are equivalent fractions.

Try These

1. Write an equivalent fraction for each fraction.

1 Whole									
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

a) $\frac{1}{5}$ _____   b) $\frac{2}{5}$ _____   c) $\frac{3}{5}$ _____   d) $\frac{4}{5}$ _____   e) $\frac{5}{5}$ _____

2. Write equivalent fractions to name the shaded part of each figure.
   a)   b)   c)

_____   _____   _____
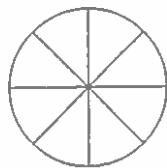
1. Fold paper strips to find an equivalent fraction for each fraction.

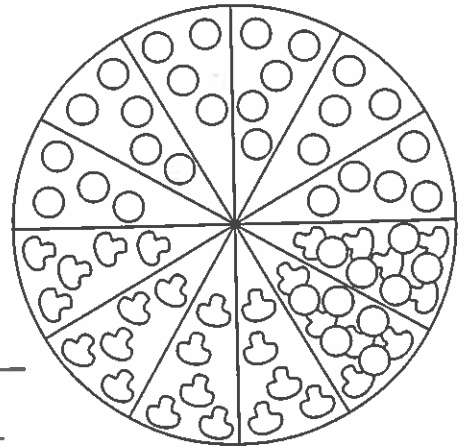a) $\frac{3}{6}$ _____   b) $\frac{1}{2}$ _____   c) $\frac{2}{4}$ _____

d) $\frac{3}{3}$ _____   e) $\frac{3}{4}$ _____   f) $\frac{2}{8}$ _____

2. a) A pizza is divided into 12 equal slices.
   4 slices have mushrooms only.
   6 slices have pepperoni only.
   2 slices have mushrooms and pepperoni.
   Write two equivalent fractions to describe
   the parts of the pizza with

   mushrooms only: _____ and _____

   pepperoni only: _____ and _____

   mushrooms and pepperoni: _____ and _____

   b) Nine slices of pizza were eaten.

   Write two equivalent fractions for this amount. _____ and _____
   Write two equivalent fractions for how much pizza was not eaten.

   _____ and _____

Stretch Your Thinking

Use the diagram.
Write four equivalent fractions to
name the shaded part.

_____ _____

_____ _____