Ratios and Rates

MAIN IDEA

• Express ratios and rates in fraction form.

BUILD YOUR VOCABULARY (pages 144–145)

A **ratio** is a comparison of two quantities by division.

EXAMPLE Write a Ratio in Simplest Form

1 RECREATION A store has 10 unicycles and 4 scooters. Write the ratio in simplest form that compares the number of scooters to the number of unicycles. Then explain its meaning.

$$\dfrac{\text{scooters}}{\text{unicycles}} \longrightarrow \boxed{} = \boxed{}$$

The ratio of scooters to unicycles is $\boxed{}$, $\boxed{}$, or $\boxed{}$.

For every $\boxed{}$ scooters, there are $\boxed{}$ unicycles.

Check Your Progress **FRUIT** Kim has 8 apples and 6 oranges. Write the ratio in simplest form that compares the number of oranges to the number of apples. Then explain its meaning.
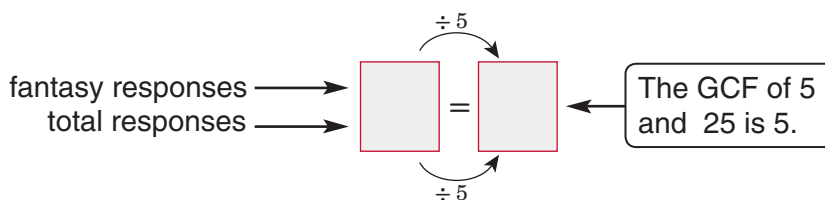
EXAMPLE Use Ratios to Compare Parts to a Whole

1 BOOKS Several students were asked to name their favorite kind of book. Write the ratio that compares the number of students who chose fantasy books to the total number of students who responded.

Favorite Book	
Subject	Number of Responses
Sports	7
History	9
Mystery	4
Fantasy	5

Five students preferred fantasy out of a total of

$\boxed{} + \boxed{} + \boxed{} + \boxed{}$ or $\boxed{}$ responses.

$$\overset{\div 5}{\overbrace{}}$$

fantasy responses $\longrightarrow$ [ ] = [ ] $\longleftarrow$ The GCF of 5 and 25 is 5.
total responses $\longrightarrow$

$$\underset{\div 5}{\underbrace{}}$$

The ratio of the number of students who chose fantasy to the

total number of responses is [   ].

Check Your Progress

SPORTS Students have the balls listed in the table available to use during recess. What is the ratio of basketballs to the total number of balls?

Ball	Number
Volleyball	2
Tennis	5
Basketball	6
Soccer	3

BUILD YOUR VOCABULARY (pages 144–145)

A **rate** is a ratio comparing two quantities with different kinds of units.

A **unit rate** has a denominator of 1.

EXAMPLE **Find a Unit Rate**

FOOD **Find the cost per ounce of a 16-ounce jar of salsa that costs $2.88.**

Write the rate that compares the

cost to the number of ounces.

Then divide to find the unit rate.

$$\overset{\div 16}{\overbrace{}}$$
$$\frac{\$2.88}{16 \text{ ounces}} = \frac{\$0.18}{[\quad] \text{ ounce}}$$
$$\underset{\div 16}{\underbrace{}}$$

So, the cost per ounce of the salsa is [   ].

Check Your Progress **TEMPERATURE** The outside temperature rises 32 degrees in four hours. Find the temperature increase for one hour.

FOLDABLES

ORGANIZE IT

Write the definition of *ratio* under the first tab of your Foldable. Include notes on finding ratios and unit rates. Be sure to write a few examples of ratios.

Ratio	Proportion	Function
Examples	Examples	Examples

HOMEWORK ASSIGNMENT

Page(s):

Exercises: