Set A, pages 300–301

Write a ratio comparing the number of rectangles to the number of circles in three ways.

There are 4 rectangles and 3 circles.

4 to 3 4:3 $\frac{4}{3}$

Remember that a ratio compares two quantities and it can be written in three ways.

Write a ratio for each comparison in three ways.

1. green figures to purple figures
2. rectangles to diamonds
3. purple figures to all figures

Set B, pages 302–304

Find two ratios equal to $\frac{21}{126}$.

One Way

Multiply.

$\frac{21 \times 2}{126 \times 2} = \frac{42}{252}$

Another Way

Divide.

$\frac{21 \div 3}{126 \div 3} = \frac{7}{42}$

Write the ratio $\frac{64}{88}$ in simplest form.

Divide both terms by the GCF of 64 and 88, which is 8.

$\frac{64}{88} = \frac{64 \div 8}{88 \div 8} = \frac{8}{11}$

Remember that to find equal ratios, you must multiply or divide both terms by the same value.

Give two ratios that are equal to each.

1. $\frac{5}{12}$
2. 14:32
3. 3 to 4
4. $\frac{7}{8}$

Write each ratio in simplest form.

5. 30 to 42
6. $\frac{56}{72}$

Set C, pages 306–307

Write 20 meters in 4 minutes as a rate and as a unit rate.

Think of the expression "20 meters in 4 minutes" as a rate, a special type of ratio that compares quantities with unlike units of measure.

$$\frac{20 \text{ meters}}{4 \text{ min}}$$

To find the unit rate, divide the first term by the second term.

$20 \div 4 = 5$ The unit rate is 5 meters per minute.

Remember that a unit rate is a comparison to 1 unit.

Write each example as a unit rate.

1. 78 miles on 3 gallons
2. 18 laps in 6 minutes
3. 48 sandwiches for 16 people
4. 49 houses in 7 blocks
5. 500 pounds of fish caught in 2 days

Set D, pages 308–309

On Pet Day, Meg's turtle crawled 30 feet in 6 minutes, and Pat's turtle crawled 25 feet in 5 minutes. Whose turtle crawled at a faster rate?

Find each unit rate and determine which rate is greater.

Write each rate: $\frac{30 \text{ ft}}{6 \text{ min}}, \frac{25 \text{ ft}}{5 \text{ min}}$

Find each unit rate: $\frac{5 \text{ ft}}{1 \text{ min}}, \frac{5 \text{ ft}}{1 \text{ min}}$

Both turtles crawled at the same rate.

Remember that converting rates to unit rates or unit prices makes them easy to compare.

Find each unit rate to answer the question.

1. Which is the better buy?
   $5.00 for 4 mangoes
   $6.00 for 5 mangoes
2. Who earned more each month?
   Atif: $84 over 3 months
   Jafar: $100 over 4 months

Set E, pages 310–312

Julia flies a plane at a rate of 390 miles per hour. How far will she fly in 3.5 hours?

Use the formula $d = r \times t$ to relate distance (d), rate (r), and time (t). You can substitute values for any two variables you know and use properties of equality and inverse relationships to find the unknown variable.

d = 390 miles per hour × 3.5 hours

= 1,365 miles

Remember that rate is the average speed.

In **1** through **3**, copy and complete the table.

Data

Race	Rate	Distance	Time
1	56 mph	4,480 mi	☐ h
2	70 mph	☐ mi	9 h
3	☐ mph	111 mi	2 h

Set F, pages 314–315

Haley is making a beaded bracelet. The ratio of turquoise beads to crystal beads is 6:4. What fraction of the beads are crystal beads?

Draw a picture to show the relationship. The ratio of turquoise beads to crystal beads is 6:4.

Turquoise beads
Crystal beads

If there are 6 turquoise beads and 4 crystal beads in a bracelet, there would be 10 beads in all. The fraction of crystal beads is $\frac{4}{10} = \frac{2}{5}$.

Remember to look back and check the question that was asked.

Draw a picture to solve each problem.

1. A wall is made up of green tiles and yellow tiles. If $\frac{1}{3}$ of the tiles are green, what is the ratio of green tiles to yellow tiles?
2. Raevan jogs two blocks and walks one block intervals for 12 blocks. How many blocks did she jog?