Set A, pages 322–323

About 1,024 MB (megabytes) are equal to 1 GB (gigabyte). About how many songs could a 1 GB (gigabyte) music player hold?

File size	256 MB	512 MB	1 GB
Songs	60 songs	120 songs	■

Find a ratio equivalent to $\frac{512}{120}$. Multiply both terms by 2.

$\frac{512 \times 2}{120 \times 2} = \frac{1{,}024}{\mathbf{240}}$

$x = 240$

A 1 GB music player can hold about 240 songs.

Remember that the values in a ratio table are proportional.

The ratio table below shows the relationship between the amount Toby earns and the amount he saves. Extend the table to answer **1** and **2**.

Earnings	$10	$20	$30
Savings	$7	$14	$21

1. How much would Toby save if he earned $40?
2. If Toby saved $35, how much did he earn?

Set B, pages 324–325

If a car travels 240 miles in 5 hours, how many miles will it travel in 1 hour?

Find the unit rate.

$240 \div 5 = 48 = \frac{48}{1}$

The car will travel 48 miles in 1 hour.

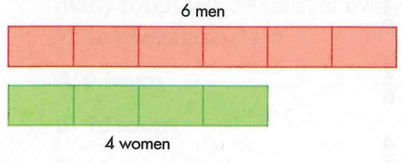
Remember to make sure your proportion contains equivalent units.

Solve each proportion using the unit rate given.

1. $\frac{17 \text{ applicants}}{1 \text{ week}} = \frac{x \text{ applicants}}{14 \text{ weeks}}$
2. $\frac{\$12.29}{1 \text{ ticket}} = \frac{x}{4 \text{ tickets}}$

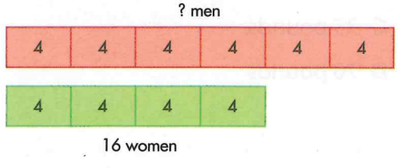
Set C, pages 326–327

Use diagrams to solve ratio problems. Model the ratio of 6 men to 4 women.



Remember that you can also use reasoning to solve ratio problems.

1. The ratio of men to women at a small wedding is 6:4. If there are 16 women at the wedding, how many men are there?



Set D, pages 328–329

Brand A shampoo is $7.68 for a 24 oz bottle.
Brand B shampoo is $12.60 for 36 oz.
Which is a better buy?

Compare the unit price for each shampoo.

$7.68 for 24 oz → unit price is $0.32 per oz

$12.60 for 36 oz → unit price is $0.35 per oz

The 24 oz bottle is a better buy.

Remember that you can use words, pictures, numbers, symbols, graphs, tables, diagrams, and models to explain your reasoning.

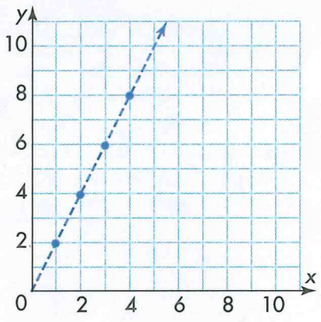
1. Which is the better buy, 2 boxes of Hearty Bran cereal at $4.86 or 4 boxes for $10? Explain.

Set E, pages 330–332

You can graph values from a ratio table on a coordinate grid.

1	2	3	4
2	4	6	8

Plot each pair of values. Connect the points with a dashed line.



Remember to use a dashed line when graphing values.

1. Complete the table to show equivalent ratios for $\frac{4}{7}$. Graph the set of values on a coordinate grid.

4	8	12	16	20
7	■	■	■	■

Set F, pages 334–336

The scale on a map is 1 inch: 240 miles. If two cities are 5 inches apart, what is the actual distance in miles?

Write a proportion to find the data.

$\frac{1 \text{ inch}}{240 \text{ miles}} = \frac{5 \text{ inches}}{x \text{ miles}}$

$\frac{1 \times 5}{240 \times 5} = \frac{5}{1{,}200}$

$x = 1{,}200$

The map distance between the two cities is 5 inches, so the actual distance between the two cities is 1,200 miles.

Remember that maps and scale drawings are reduced or enlarged by the same ratio.

1. The map scale is 1 in. : 5 mi. If the map distance between Sean's home and the state park is 3 inches, what is the actual distance?
2. The drawing of the new school has a scale of 1 in. : 8 ft. In the drawing, the school is 6 inches tall. What is the actual height of the school?