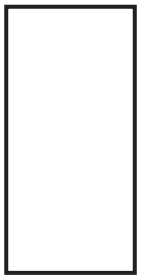
Cumulative Review

1. Use the bar model to organize the information in the following problem. Identify the given and unknown information, set up the proportion, and solve the problem.

Percent Bar Method	Given Information	Set Up Proportions
Romeo made 24 enchiladas for his friends. At the barbecue, his friends ate 18 of the enchiladas. What percentage of the enchiladas did his friends eat?		
	Part: 18 Whole: 24 Percent: x	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{\quad}{\quad} = \frac{\quad}{\quad}$

Cumulative Review (cont.)

2. Use the graphic organizer to solve the following problem.

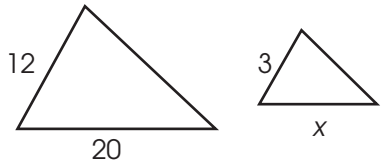
A community center is putting on a charity garage sale. For every 30 people, the community center is hoping to make, on average, $70. At that rate, if 210 people show up, how much money will the center make?

Understand	Plan
What is the question?	What quantities am I comparing? What do I know? What quantities go together? What am I looking for? How would I set this up?
Solve	**Check**
What is the most efficient method to solve?	Is my answer reasonable? How do I know?

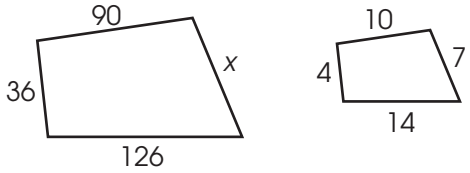
Practice 1

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

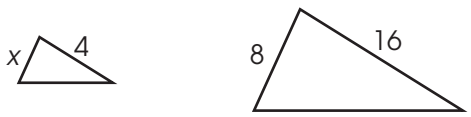
1.



2.



3.



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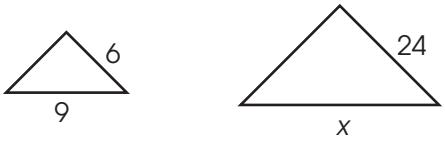
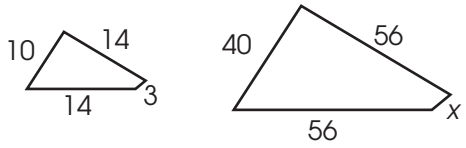


Practice 2

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

1.



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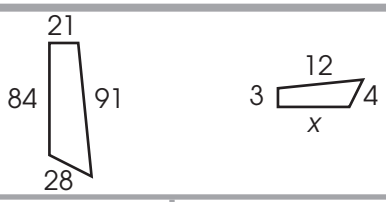

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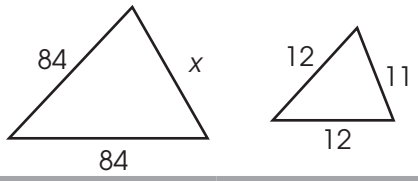
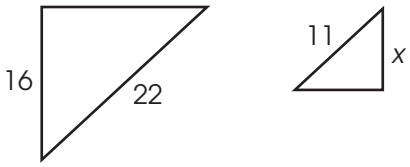


4.

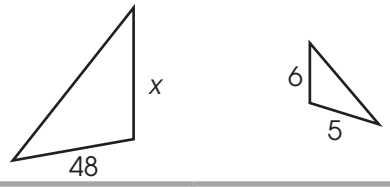


Name: _____

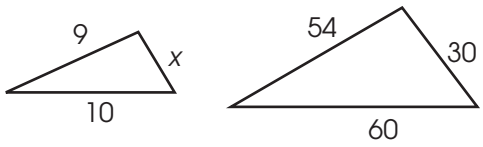
Independent Practice

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

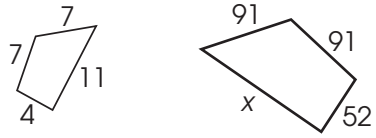
1.



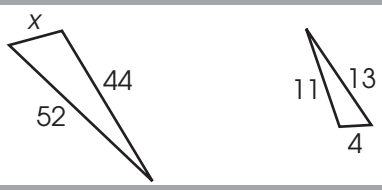
2.



3.

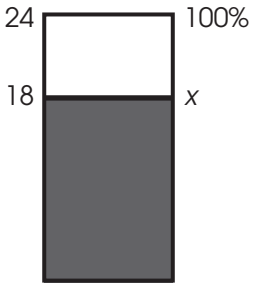


4.



Answer Key: Cumulative Review

1. Use the bar model to organize the information in the following problem. Identify the given and unknown information, set up the proportion, and solve the problem.

Percent Bar Method	Given Information	Set Up Proportions
Romeo made 24 enchiladas for his friends. At the barbecue, his friends ate 18 of the enchiladas. What percentage of the enchiladas did his friends eat?		
	Part: 18 Whole: 24 Percent: x	$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Percent}}{100}$ $\frac{18}{24} = \frac{x}{100}$ $\frac{24x}{24} = \frac{1{,}800}{24}$ $x = 75\%$

Answer Key: Cumulative Review (cont.)

2. Use the graphic organizer to solve the following problem.

A community center is putting on a charity garage sale. For every 30 people, the community center is hoping to make, on average, $70. At that rate, if 210 people show up, how much money will the center make?

Understand

What is the question?

How much money will the center make?

Plan

What quantities am I comparing?

Number of people and money made

What do I know?

If 30 people attend, the center makes $70; 210 people attend

What quantities go together?

30 people and $70 and 210 people and $x

What am I looking for?

Money the center will make

How would I set this up?

Units	Ratio 1		Ratio 2
$\frac{\text{People}}{\text{Money}}$	$\frac{30}{70}$	=	$\frac{210}{x}$

Solve

What is the most efficient method to solve?

Units	Ratio 1		Ratio 2
$\frac{\text{People}}{\text{Money}}$	$\frac{30 \times 7}{70 \times 7}$	=	$\frac{210}{x}$

$$70 \times 7 = x$$

$$\$490 = x$$

Check

Is my answer reasonable? How do I know?

Ratio 1		Ratio 2
$\frac{30 \div 10}{70 \div 10}$	=	$\frac{210 \div 70}{490 \div 70}$

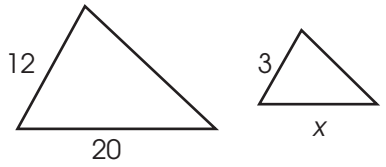
Ratio 1		Ratio 2
$\frac{3}{7}$	=	$\frac{3}{7}$

Answer Key: Practice 1

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

Answers will vary.

1.



÷ 4

$\frac{12}{20} = \frac{3}{x}$

÷ 4

$20 \div 4 = x$

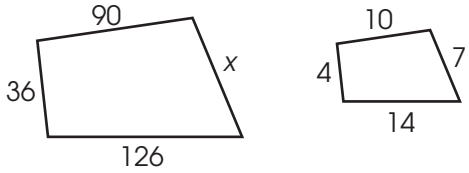
$5 = x$

$\frac{12}{3} = \frac{20}{x}$

$\frac{60}{12} = \frac{12x}{12}$

$5 = x$

2.



x 9

$\frac{x}{36} = \frac{7}{4}$

x 9

$7 \times 9 = x$

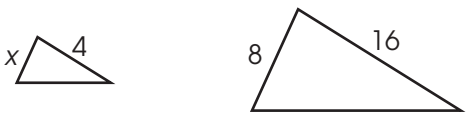
$63 = x$

$\frac{x}{7} = \frac{90}{10}$

$\frac{630}{10} = \frac{10x}{10}$

$63 = x$

3.



x 4

$\frac{x}{4} = \frac{8}{16}$

x 4

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

$x = 2$

x 2

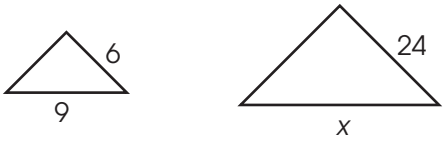
$\frac{x}{8} = \frac{4}{16}$

x 2

$\frac{2x}{2} = \frac{4}{2}$

$x = 2$

4.



x 4

$\frac{6}{9} = \frac{24}{x}$

x 4

$9 \times 4 = x$

$36 = x$

$\frac{6}{24} = \frac{9}{x}$

$\frac{216}{6} = \frac{6x}{6}$

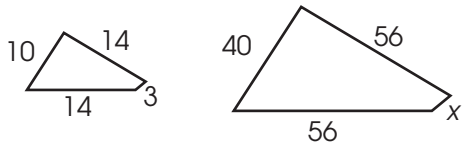
$36 = x$

Answer Key: Practice 2

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

Answers will vary.

1.



x 4

$\frac{3}{10} = \frac{x}{40}$

x 4

$3 \times 4 = x$

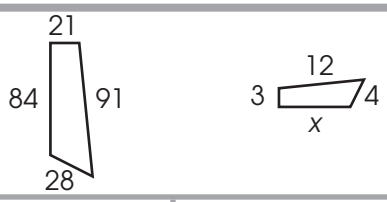
$12 = x$

$\frac{3}{x} = \frac{10}{40}$

$\frac{10x}{10} = \frac{120}{10}$

$x = 12$

2.



÷ 7

$\frac{21}{91} = \frac{3}{x}$

÷ 7

$91 \div 7 = x$

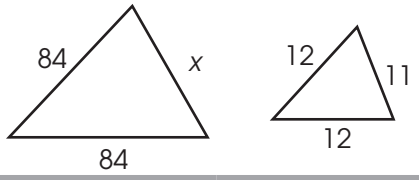
$13 = x$

$\frac{91}{x} = \frac{21}{3}$

$21x = 273$

$x = 13$

3.



x 7

$\frac{x}{84} = \frac{11}{12}$

x 7

$11 \times 7 = x$

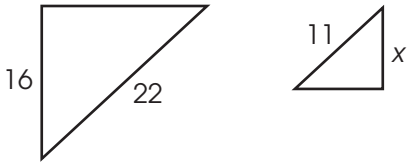
$77 = x$

$\frac{x}{11} = \frac{84}{12}$

$\frac{924}{12} = \frac{12x}{12}$

$77 = x$

4.



÷ 2

$\frac{16}{22} = \frac{x}{11}$

÷ 2

$16 \div 2 = x$

$8 = x$

$\frac{16}{x} = \frac{22}{11}$

$\frac{22x}{22} = \frac{176}{22}$

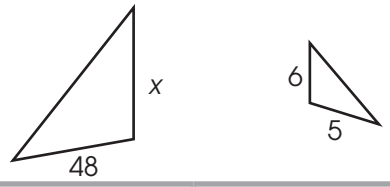
$x = 8$

Answer Key: Independent Practice

Assuming each pair of figures is similar, determine the missing side length, *x*, using 2 different proportions.

Answers will vary.

1.



$\times 8$

$\frac{x}{48} = \frac{5}{6}$

$\times 8$

$5 \times 8 = x$

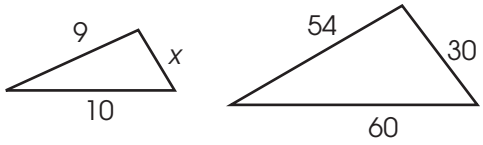
$40 = x$

$\frac{x}{5} = \frac{48}{6}$

$240 = 6x$

$40 = x$

2.



$\div 6$

$\frac{x}{10} = \frac{30}{60}$

$\div 6$

$30 \div 6 = x$

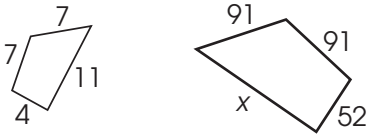
$5 = x$

$\frac{x}{30} = \frac{10}{60}$

$\frac{300}{60} = \frac{60x}{60}$

$5 = x$

3.



$\times 13$

$\frac{4}{11} = \frac{52}{x}$

$\times 13$

$11 \times 13 = x$

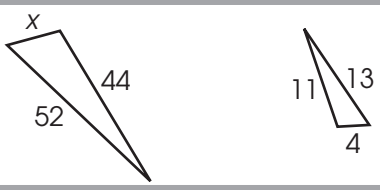
$143 = x$

$\frac{4}{52} = \frac{11}{x}$

$\frac{572}{4} = \frac{4x}{4}$

$143 = x$

4.



$\times 4$

$\frac{x}{44} = \frac{4}{11}$

$\times 4$

$4 \times 4 = x$

$16 = x$

$\frac{x}{4} = \frac{44}{11}$

$\frac{176}{11} = \frac{11x}{11}$

$16 = x$