

Cumulative Review

1. Highlight the important information in the problem.
2. Answer the questions and fill in the sections of the graphic organizer.

Eracio's recipe for chocolate snickerdoodle cookies calls for 4 cups of chocolate chips to make 24 cookies. To enter a contest, he must make at least 36 cookies. To be safe, Eracio plans to make 42 cookies, so he buys 7 cups of chocolate chips. Set up a proportion to show the cups of chocolate chips per 24 cookies compared to the cups of chocolate chips needed for 42 cookies.

Understand

What is the question?

Plan

What quantities am I comparing?

What do I know?

What quantities go together?

How would I set this up?

Units **Ratio 1** **Ratio 2**

_____ = _____

Solve

Which formats represent the relationship in the problem?

Units **Ratio 1** **Ratio 2**

_____ = _____

Units **Ratio 1** **Ratio 2** **Units**

_____ = _____

Units **Ratio 1** **Ratio 2** **Units**

_____ = _____

Check

Is my answer reasonable? How do I know?

Cumulative Review (cont.)

2. $\frac{\text{dogs}}{\text{puppies}} = \frac{20}{5} = \frac{x}{9}$

What strategy? _____

Show your work:

$x =$ _____

3. Ming makes \$7 per hour working at the department store. If she works 30 hours, how much money will she make? (ignore taxes)

$$\frac{\text{dollars}}{\text{hours}} = \frac{7}{1} = \frac{x}{30}$$

Practice

Complete each problem. Check your answers with a partner and discuss reasoning.

1. Mary wants to buy a jacket that costs \$50. She will earn \$2 in store credit for every \$5 she spends. How much store credit will she earn for purchasing the jacket?

Understand

What is the question?

Plan

What quantities am I comparing?

What do I know?

What quantities go together?

What am I looking for?

How would I set this up?

Units

Ratio 1

Ratio 2

_____ = _____

Solve

What is the most efficient method to solve?

Check

Is my answer reasonable? How do I know?

Ratio 1

Ratio 2

_____ = _____

Ratio 1

Ratio 2

_____ = _____

Practice (cont.)

2. Jamie spends \$4 for every 16 text messages she sends over her limit. This month, Jamie sent 40 text messages over her limit. How much will she have to pay?

Understand

What is the question?

Plan

What quantities am I comparing?

What do I know?

What quantities go together?

What am I looking for?

How would I set this up?

Units	Ratio 1	Ratio 2
_____	_____	_____

Solve

What is the most efficient method to solve?

Check

Is my answer reasonable? How do I know?

Ratio 1	Ratio 2
_____	_____

Ratio 1	Ratio 2
_____	_____

Name: _____

Independent Practice

1. Sam turns in, on average, 10 out of every 12 homework assignments. If he had 42 assignments during the semester, about how many did he turn in?

Understand

What is the question?

Plan

What quantities am I comparing?

What do I know?

What quantities go together?

What am I looking for?

How would I set this up?

Units

Ratio 1

Ratio 2

_____ = _____

Solve

What is the most efficient method to solve?

Check

Is my answer reasonable? How do I know?

Ratio 1 Ratio 2

_____ = _____

Ratio 1 Ratio 2

_____ = _____

Independent Practice (cont.)

2. Reagan got 34 out of 50 questions correct on her last English quiz. At this same rate, how many questions should she expect to get correct on a test with 100 questions?

Understand

What is the question?

Plan

What quantities am I comparing?

What do I know?

What quantities go together?

What am I looking for?

How would I set this up? (use the format)

Units	Ratio 1		Ratio 2
_____	_____	=	_____

Solve

What is the most efficient method to solve?

Check

Is my answer reasonable? How do I know?

Ratio 1		Ratio 2
_____	=	_____

Ratio 1		Ratio 2
_____	=	_____



Answer Key: Cumulative Review

1. Highlight the important information in the problem.
2. Answer the questions and fill in the sections of the graphic organizer.

Eracio's recipe for chocolate snickerdoodle cookies calls for 4 cups of chocolate chips to make 24 cookies. To enter a contest, he must make at least 36 cookies. To be safe, Eracio plans to make 42 cookies, so he buys 7 cups of chocolate chips. Set up a proportion to show the cups of chocolate chips per 24 cookies compared to the cups of chocolate chips needed for 42 cookies.

Understand

What is the question?

We are looking for the proportion that compares the number of cups of chocolate chips to the number of cookies.

Plan

What quantities am I comparing?

Cups of chocolate chips and cookies

What do I know?

4 cups for 24 cookies; 7 cups for 42 cookies

What quantities go together?

4 cups and 24 cookies; 7 cups and 42 cookies

How would I set this up?

Units	Ratio 1	Ratio 2
$\frac{\text{Cups}}{\text{Cookies}}$	$\frac{4}{24}$	$= \frac{7}{42}$

Solve

Which formats represent the relationship in the problem?

Units	Ratio 1	Ratio 2
$\frac{\text{Cookies}}{\text{Cups}}$	$\frac{24}{4}$	$= \frac{42}{7}$

Units	Ratio 1	Ratio 2	Units
$\frac{\text{Cookies}}{\text{Cookies}}$	$\frac{24}{42}$	$= \frac{4}{7}$	$\frac{\text{Cups}}{\text{Cups}}$

Units	Ratio 1	Ratio 2	Units
$\frac{\text{Cups}}{\text{Cups}}$	$\frac{4}{7}$	$= \frac{24}{42}$	$\frac{\text{Cookies}}{\text{Cookies}}$

Check

Is my answer reasonable? How do I know?

My answers are reasonable because we proved a relationship exists and all cross products are the same, proving proportionality.



Answer Key: Cumulative Review (cont.)

2. $\frac{\text{dogs}}{\text{puppies}} = \frac{20}{5} = \frac{x}{9}$

What strategy? Cross products

Show your work:

$$\frac{5x}{5} = \frac{180}{5}$$

$x = \underline{36}$

3. Ming makes \$7 per hour working at the department store. If she works 30 hours, how much money will she make? (ignore taxes)

$$\frac{\text{dollars}}{\text{hours}} = \frac{7}{1} = \frac{x}{30} \quad x = 210$$



Answer Key: Practice

Complete each problem. Check your answers with a partner and discuss reasoning.

1. Mary wants to buy a jacket that costs \$50. She will earn \$2 in store credit for every \$5 she spends. How much store credit will she earn for purchasing the jacket?

Understand

What is the question?

How much store credit will she earn if she spends \$50?

Plan

What quantities am I comparing?

Dollars spent and earned

What do I know?

\$2 earned for \$5 spent; \$50 was spent

What quantities go together?

\$2 earned and \$5 spent; x earned and \$50 spent

What am I looking for?

How many dollars were earned

How would I set this up?

Units	Ratio 1	Ratio 2
$\frac{\$ \text{ earned}}{\$ \text{ spent}}$	$\frac{2}{5}$	$= \frac{x}{50}$

Solve

What is the most efficient method to solve?

Units	Ratio 1	Ratio 2
$\frac{\$ \text{ earned}}{\$ \text{ spent}}$	$\frac{2 \times 10}{5 \times 10}$	$= \frac{20}{50}$

Check

Is my answer reasonable? How do I know?

Ratio 1	Ratio 2
$\frac{2 \div 1}{5 \div 1}$	$= \frac{20 \div 10}{50 \div 10}$

Ratio 1	Ratio 2
$\frac{2}{5}$	$= \frac{2}{5}$



Answer Key: Practice (cont.)

2. Jamie spends \$4 for every 16 text messages she sends over her limit. This month, Jamie sent 40 text messages over her limit. How much will she have to pay?

Understand

What is the question?

How much will Jamie have to pay for sending 40 text messages over her limit?

Plan

What quantities am I comparing?

dollars and text messages over limit

What do I know?

\$4 for 16 texts over; 40 texts over

What quantities go together?

\$4 and 16 texts over; x and 40 texts over

What am I looking for?

The amount paid for 40 texts over

How would I set this up?

Units	Ratio 1	Ratio 2
$\frac{\text{Dollars}}{\text{Texts over}}$	$\frac{4}{16}$	$= \frac{x}{40}$

Solve

What is the most efficient method to solve?

Units	Ratio 1	Unit rate	Ratio 2
$\frac{\text{Dollars}}{\text{Texts over}}$	$\frac{4 \div 4}{16 \div 4}$	$= \frac{1 \times 10}{4 \times 10}$	$= \frac{10}{40}$

Check

Is my answer reasonable? How do I know?

Ratio 1	Ratio 2
$\frac{4 \div 4}{16 \div 4}$	$= \frac{10 \div 10}{40 \div 10}$

Ratio 1	Ratio 2
$\frac{1}{4}$	$= \frac{1}{4}$



Answer Key: Independent Practice

1. Sam turns in, on average, 10 out of every 12 homework assignments. If he had 42 assignments during the semester, about how many did he turn in?

Understand

What is the question?

How many homework assignments did Sam turn in during the semester?

Plan

What quantities am I comparing?

Total assignments and assignments turned in

What do I know?

10 out of 12 assigned were turned in; 42 assigned

What quantities go together?

10 turned in and 12 assigned; x turned in and 42 assigned

What am I looking for?

How many assignments turned in

How would I set this up?

Units	Ratio 1	Ratio 2
Turned in	10	x
Assigned	12	42

Solve

What is the most efficient method to solve?

Units	Ratio 1	Ratio 2
Turned in	10	x
Assigned	12	42

$$420 = 12x$$

$$35 \text{ assignments turned in} = x$$

Units	Ratio 1	Ratio 2
Turned in	10	35
Assigned	12	42

Check

Is my answer reasonable? How do I know?

$$\frac{10 \div 2}{12 \div 2} = \frac{35 \div 7}{42 \div 7}$$

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



Answer Key: Independent Practice (cont.)

2. Reagan got 34 out of 50 questions correct on her last English quiz. At this same rate, how many questions should she expect to get correct on a test with 100 questions?

Understand

What is the question?

How many questions should Reagan expect to get correct out of 100?

Plan

What quantities am I comparing?

answers correct and total questions

What do I know?

34 correct out of 50 questions; 100 total questions

What quantities go together?

34 correct and 50 questions; x correct and 100 questions

What am I looking for?

The number of correct answers

How would I set this up? (use the format)

Units	Ratio 1	Ratio 2
$\frac{\text{Correct}}{\text{Questions}}$	$\frac{34}{50}$	$= \frac{x}{100}$

Solve

What is the most efficient method to solve?

Units	Ratio 1	Ratio 2
$\frac{\text{Correct}}{\text{Questions}}$	$\frac{34 \times 2}{50 \times 2}$	$= \frac{68}{100}$

Check

Is my answer reasonable? How do I know?

$$\frac{\text{Ratio 1}}{34 \div 2} = \frac{\text{Ratio 2}}{68 \div 4}$$

$$\frac{34 \div 2}{50 \div 2} = \frac{68 \div 4}{100 \div 4}$$

$$\frac{\text{Ratio 1}}{17} = \frac{\text{Ratio 2}}{25}$$

$$\frac{17}{25} = \frac{17}{25}$$