

## Cumulative Review

1. In the parking garage, it costs \$2.00 per 3 hours to park. If Jason parks for 12 hours, how much will it cost for him to park in the garage?

$$\frac{\text{dollars}}{\text{hours}} \quad \frac{2}{3} = \frac{x}{12}$$

2. Brenda is going to England for vacation. The exchange rate is 1 British pound for every 2 U.S. dollars. If Brenda received 50 British pounds, how many U.S. dollars did she exchange?

$$\frac{\text{dollars}}{\text{pounds}} \quad \frac{2}{1} = \frac{x}{50}$$

3. Determine whether the ratios are proportional by using cross products.

$$\frac{3}{6} \quad \frac{8}{16}$$

| Proportion   |                    | Solve | Multiplied numerators by... |
|--|--------------------|-------|-----------------------------|
| 4.   | Numerators         |       |                             |
| $\frac{2 \text{ baseballs}}{6 \text{ bats}} = \frac{x}{18 \text{ bats}}$ | Denominators       |       |                             |
|  | Common denominator |       |                             |

## Practice

Determine the most efficient strategy, and then solve for the missing value. After every 2 problems, check your answers with a partner and discuss reasoning.

Remember to ask yourself these questions:

- Can I easily multiply by a scale factor?
- If not, is 1 of the numbers in the complete ratio the greatest common factor of both numbers, so I can find the unit rate and then easily multiply by a scale factor?

If you answer, "No" to both questions, you can always use cross products.

1.  $\frac{\text{pencils}}{\text{pens}} \quad \frac{2}{3} = \frac{x}{24}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

2.  $\frac{\text{trees}}{\text{shrubs}} \quad \frac{3}{9} = \frac{x}{21}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

 Check with a partner and discuss reasoning.

3.  $\frac{\text{girls}}{\text{boys}} \quad \frac{6}{10} = \frac{x}{100}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

4.  $\frac{\text{forks}}{\text{spoons}} \quad \frac{8}{30} = \frac{5}{x}$

What strategy? \_\_\_\_\_

Show your work:

$$\frac{8x}{8} = \frac{150}{8}$$

$x =$  \_\_\_\_\_

 Check with a partner and discuss reasoning.

Name: \_\_\_\_\_

## Independent Practice

Determine the most efficient strategy, and then solve for the missing value.

Remember to ask yourself these questions:

- Can I easily multiply by a scale factor?
- If not, is 1 of the numbers in the complete ratio the greatest common factor of both numbers, so I can find the unit rate and then easily multiply by a scale factor?

If you answer, "No" to both questions, you can always use cross products.

1.  $\frac{\text{couches}}{\text{chairs}} = \frac{2}{8} = \frac{x}{20}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

2.  $\frac{\text{windows}}{\text{doors}} = \frac{6}{8} = \frac{x}{20}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

3.  $\frac{\text{cookies}}{\text{cupcakes}} = \frac{4}{10} = \frac{x}{25}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_

4.  $\frac{\text{shoes}}{\text{socks}} = \frac{2}{7} = \frac{x}{56}$

What strategy? \_\_\_\_\_

Show your work:

$x =$  \_\_\_\_\_



## Answer Key: Cumulative Review

1. In the parking garage, it costs \$2.00 per 3 hours to park. If Jason parks for 12 hours, how much will it cost for him to park in the garage?

$$\frac{\text{dollars}}{\text{hours}} \quad \frac{2}{3} = \frac{x}{12} \quad x = 8$$

2. Brenda is going to England for vacation. The exchange rate is 1 British pound for every 2 U.S. dollars. If Brenda received 50 British pounds, how many U.S. dollars did she exchange?

$$\frac{\text{dollars}}{\text{pounds}} \quad \frac{2}{1} = \frac{x}{50} \quad x = 100$$

3. Determine whether the ratios are proportional by using cross products.

$$\frac{3}{6} \quad \frac{8}{16} \quad 48 = 48$$

proportional

| Proportion   |                    |          | Solve   | Multiplied numerators by... |
|--|--------------------|----------|---|-----------------------------|
| 4.   | Numerators         | 2 and x  | $\frac{2}{6} = \frac{x}{18}$  | 6 and 18                    |
| $\frac{2 \text{ baseballs}}{6 \text{ bats}} = \frac{x}{18 \text{ bats}}$ | Denominators       | 6 and 18 | $\frac{2 \cdot 18}{6 \cdot 18} = \frac{x \cdot 6}{18 \cdot 6}$              |                             |
|  | Common denominator | 108      | $\frac{36}{108} = \frac{6x}{108}$<br>$36 = 6x$<br>$x = 6 \text{ baseballs}$ |                             |



## Answer Key: Practice

Determine the most efficient strategy, and then solve for the missing value. After every 2 problems, check your answers with a partner and discuss reasoning.

Remember to ask yourself these questions:

- Can I easily multiply by a scale factor?
- If not, is 1 of the numbers in the complete ratio the greatest common factor of both numbers, so I can find the unit rate and then easily multiply by a scale factor?

If you answer, "No" to both questions, you can always use cross products.

1.  $\frac{\text{pencils}}{\text{pens}} \quad \frac{2}{3} = \frac{x}{24}$

What strategy? Scale factor

Show your work:

$$\frac{\text{pencils}}{\text{pens}} \quad \frac{2 \cdot 8}{3 \cdot 8} = \frac{16}{24}$$

$x = \underline{16}$

2.  $\frac{\text{trees}}{\text{shrubs}} \quad \frac{3}{9} = \frac{x}{21}$

What strategy? Unit rate

Show your work:

| Units  | Ratio 1                     | Unit rate                         | Ratio 2          |
|--------|-----------------------------|-----------------------------------|------------------|
| trees  | $\frac{3 \div 3}{9 \div 3}$ | $= \frac{1 \times 7}{3 \times 7}$ | $= \frac{7}{21}$ |
| shrubs |                             |                                   |                  |

$x = \underline{7}$

**STOP**: Check with a partner and discuss reasoning.

3.  $\frac{\text{girls}}{\text{boys}} \quad \frac{6}{10} = \frac{x}{100}$

What strategy? Scale factor

Show your work:

$$\frac{\text{girls}}{\text{boys}} \quad \frac{6 \cdot 10}{10 \cdot 10} = \frac{60}{100}$$

$x = \underline{60}$

4.  $\frac{\text{forks}}{\text{spoons}} \quad \frac{8}{30} = \frac{5}{x}$

What strategy? Cross products

Show your work:

$$\frac{8x}{8} = \frac{150}{8}$$

$x = \underline{18.75}$

**STOP**: Check with a partner and discuss reasoning.



**Answer Key: Independent Practice**

Determine the most efficient strategy, and then solve for the missing value.

Remember to ask yourself these questions:

- Can I easily multiply by a scale factor?
- If not, is 1 of the numbers in the complete ratio the greatest common factor of both numbers, so I can find the unit rate and then easily multiply by a scale factor?

If you answer, "No" to both questions, you can always use cross products.

1.  $\frac{\text{couches}}{\text{chairs}} \quad \frac{2}{8} = \frac{x}{20}$

What strategy? Unit rate

Show your work:

| Units   | Ratio 1                     | Unit rate                       | Ratio 2        |
|---------|-----------------------------|---------------------------------|----------------|
| couches | $\frac{2 \div 2}{8 \div 2}$ | $\frac{1 \times 5}{4 \times 5}$ | $\frac{5}{20}$ |
| chairs  |                             |                                 |                |

$x = \underline{5}$

2.  $\frac{\text{windows}}{\text{doors}} \quad \frac{6}{8} = \frac{x}{20}$

What strategy? Cross products

Show your work:

$$\frac{120}{8} = \frac{8x}{8}$$

$x = \underline{15}$

3.  $\frac{\text{cookies}}{\text{cupcakes}} \quad \frac{4}{10} = \frac{x}{25}$

What strategy? Cross products

Show your work:

$$\frac{100}{10} = \frac{10x}{10}$$

$x = \underline{10}$

4.  $\frac{\text{shoes}}{\text{socks}} \quad \frac{2}{7} = \frac{x}{56}$

What strategy? Scale factor

Show your work:

$$\frac{\text{shoes}}{\text{socks}} \quad \frac{2 \cdot 8}{7 \cdot 8} = \frac{16}{56}$$

$x = \underline{16}$