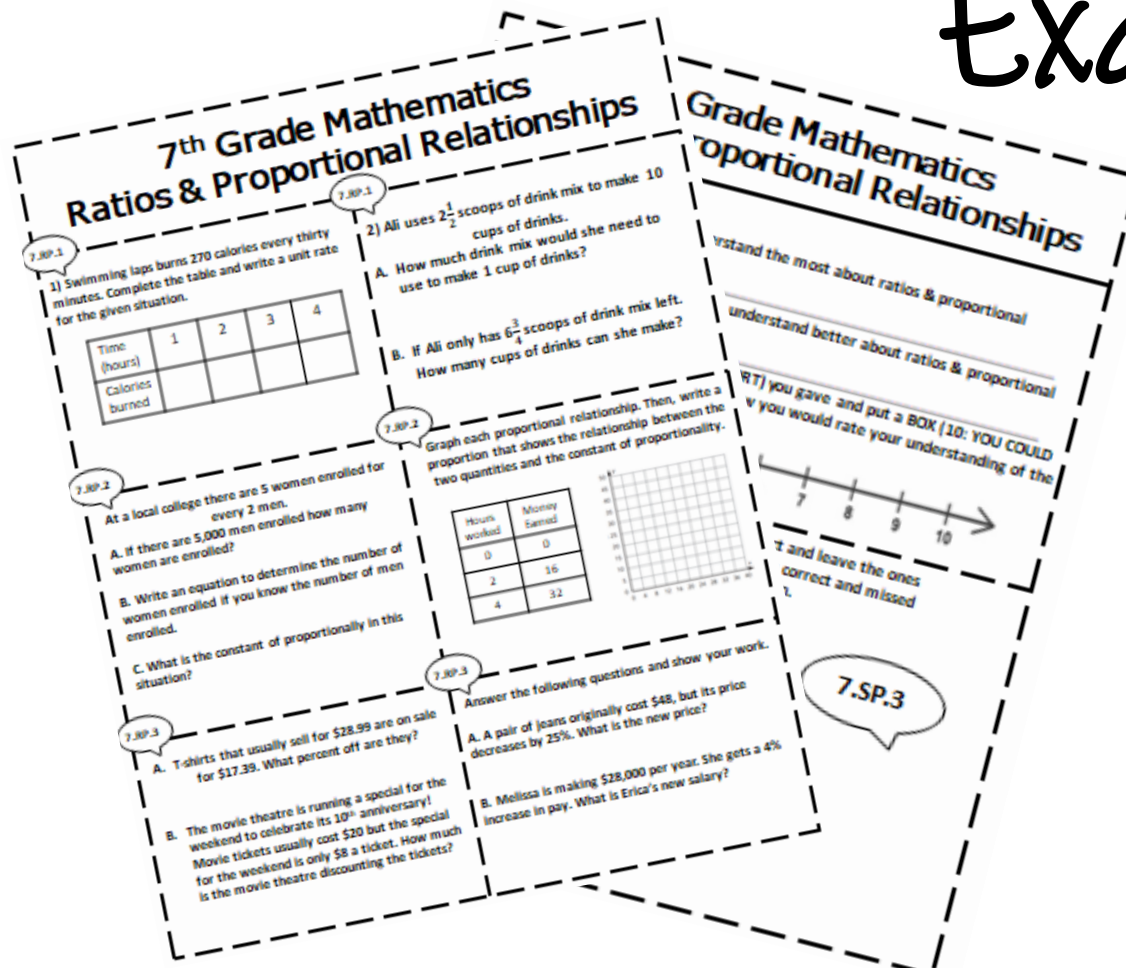


Grade

7

Aligned to the Common Core

Ratios & Proportional Relationships Exam



2 QUESTIONS PER STANDARD



By: Math in the Midwest

7th Grade Mathematics

Ratios & Proportional Relationships

7.RP.1

1) Swimming laps burns 270 calories every thirty minutes. Complete the table and write a unit rate for the given situation.

| Time (hours) | 1 | 2 | 3 | 4 |
|-----------------|---|---|---|---|
| Calories burned | | | | |

7.RP.1

2) Ali uses $2\frac{1}{2}$ scoops of drink mix to make 10 cups of drinks.

A. How much drink mix would she need to use to make 1 cup of the drink?

B. If Ali only has $6\frac{3}{4}$ scoops of drink mix left. How many cups of drinks can she make?

7.RP.2

At a local college there are five women enrolled for every two men.

A. If there are 5,000 men enrolled how many women are enrolled?

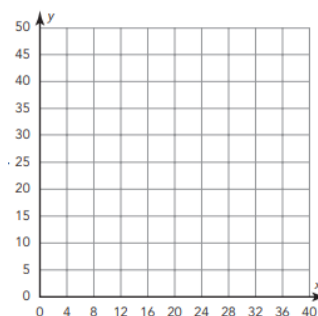
B. Write an equation to determine the number of women enrolled if you know the number of men enrolled.

C. What is the constant of proportionality in this situation?

7.RP.2

Graph each proportional relationship. Then write a proportion that shows the relationship between the two quantities and the constant of proportionality.

| Hours worked | Money Earned |
|--------------|--------------|
| 0 | 0 |
| 2 | 16 |
| 4 | 32 |



7.RP.3

A. T-shirts that usually sell for \$28.99 are on sale for \$17.39. What percent off are they?

B. The movie theatre is running a special for the weekend to celebrate its 10th anniversary! Movie tickets usually cost \$20 but the special for the weekend is only \$8 a ticket. How much is the movie theatre discounting the tickets?

7.RP.3

Answer the following questions and show your work.

A. A pair of jeans originally cost \$48, but its price decreased by 25%. What is the new price?

B. Melissa is making \$28,000 per year. She gets a 4% increase in pay. What is Melissa's new salary?

Name: _____ Date: _____ Hour: _____

7th Grade Mathematics

Ratios & Proportional Relationships

REFLECTION

A. What do you feel like you understand the most about ratios & proportional relationships?

B. What is one area you would like to understand better about ratios & proportional relationships?

C. **CIRCLE the effort** (10: MAXIMUM EFFORT) you gave and put a **BOX** (10: YOU COULD TEACH THIS TO SOMEONE ELSE) around how you would rate your **UNDERSTANDING** of the content using the number line below.



7th Grade Mathematics

Ratios & Proportional Relationships

7.RP.1

1) Swimming laps burns 270 calories every thirty minutes. Complete the table and write a unit rate for the given situation.

| Time (hours) | 1 | 2 | 3 | 4 |
|-----------------|-----|------|------|------|
| Calories burned | 540 | 1080 | 1620 | 2160 |

7.RP.1

2) Ali uses $2\frac{1}{2}$ scoops of drink mix to make 10 cups of drinks.

A. How much drink mix would she need to use to make 1 cup of the drink?

$\frac{1}{4}$ scoop

B. If Ali only has $6\frac{3}{4}$ scoops of drink mix left. How many cups of drinks can she make?

27 drinks

7.RP.2

At a local college there are five women enrolled for every two men.

A. If there are 5,000 men enrolled how many women are enrolled?

12,500 women

B. Write an equation to determine the number of women enrolled if you know the number of men enrolled.

$$w = \frac{5}{2}m$$

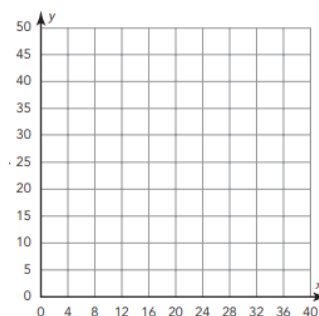
C. What is the constant of proportionality in this situation?

$\frac{5}{2}$

7.RP.2

Graph each proportional relationship. Then write a proportion that shows the relationship between the two quantities and the constant of proportionality.

| Hours worked | Money Earned |
|--------------|--------------|
| 0 | 0 |
| 2 | 16 |
| 4 | 32 |



$$\frac{m}{h} = \frac{8}{1}$$

7.RP.3

A. T-shirts that usually sell for \$28.99 are on sale for \$17.39. What percent off are they?

40 percent off

B. The movie theatre is running a special for the weekend to celebrate its 10th anniversary! Movie tickets usually cost \$20 but the special for the weekend is only \$8 a ticket. How much is the movie theatre discounting the tickets?

60 percent off

7.RP.3

Answer the following questions and show your work.

A. A pair of jeans originally cost \$48, but its price decreased by 25%. What is the new price?

\$36

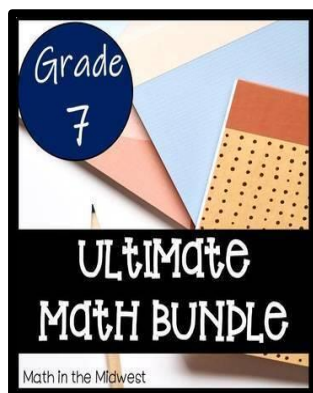
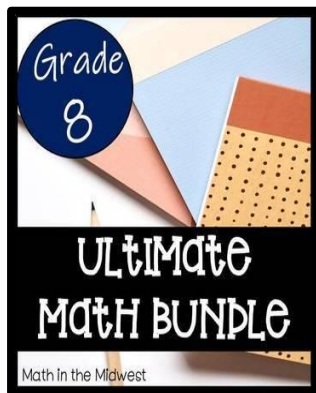
B. Melissa is making \$28,000 per year. She gets a 4% increase in pay. What is Melissa's new salary?

\$29,120

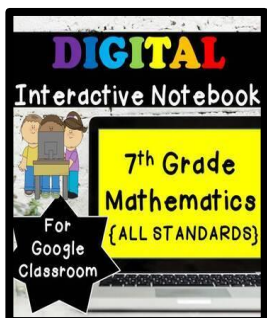
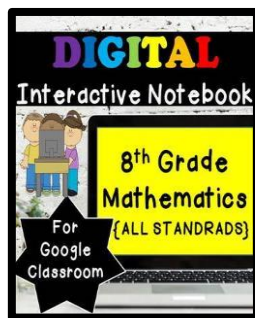
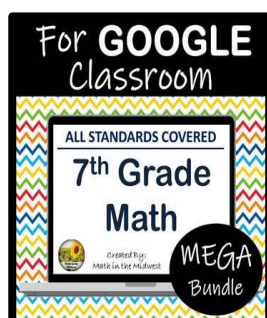
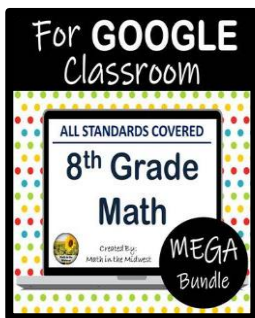
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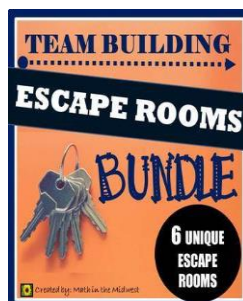
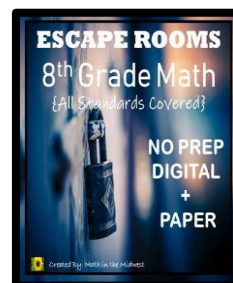
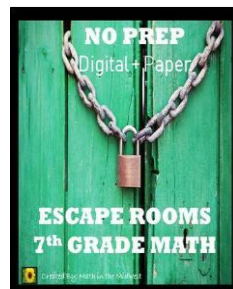
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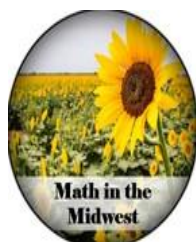
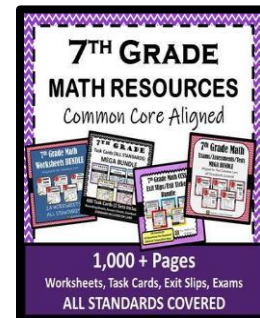
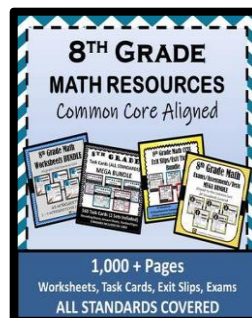
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