

A. Solving Proportions

Use the cross-products to solve each proportion

1. $\frac{4}{5} = \frac{x}{20}$

2. $\frac{2}{4} = \frac{13}{x}$

Hint: cross multiply and divide by the coefficient

B. Unit Rate

Given the following, find the unit rate.
Show a proportion for each problem.

1. 108 passengers in 9 vans (how many passengers in 1 van?)
2. \$5.00 for 2 pineapples (how much for 1?)
3. \$12.60 for 3 pounds of apples

Hint: Show a proportion for each problem.

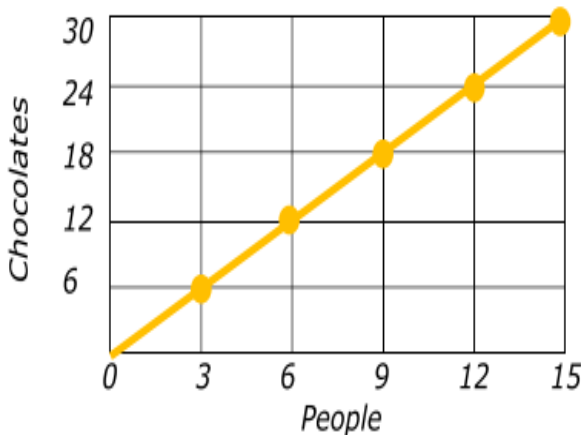
C. Write an equation

Use the information to write an equation in the form $y=kx$.

1.

x	4	5	8	12
y	3.6	4.5	7.2	10.8

2.



Hint: Remember that $k=y/x$

D. % of a Number

Remember:

$$\text{Part} = \% \times \text{whole} \quad \text{OR} \quad \frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

1. What is 20% of 45?
2. 9 is 25% of what number?
3. 18 is what % of 24?

E. Proportional Relationships

1. If the ratio of green M&Ms to blue M&Ms is $2:3$, how many green M&Ms are in the bag if there are 18 blue?
2. If the car is traveling 50 miles in 30 minutes, what is the speed in miles per hour?

F. Part to Whole Ratios

1. If the ratio at the dance of boys to girls is 2:3, how many total boys are at the dance if there are 300 students?
2. At the carnival, one child received 3 tickets for every 4 tickets her brother received. If a total of 35 tickets were given out, how many did each child receive?

G. Percent Problems

1. On the test 25% of the students in the class made an A. OF THE REMAINING STUDENTS, 30% failed. How many students failed if there are 40 students in the class?

H. Commission

Commission is a percent paid to an employee as a result of a sale.

1. John sold 10 TVs for a total of \$3,425.00. If he earns a 3% commission for his sales, how much will he receive?
2. How much did Paul sell if his commission is 5% and his paycheck was \$350.00.

Hint: $\text{part} = \% \times \text{whole}$

I. Comparisons

1. Which lemonade would be more concentrated?

2 scoops of powder to 4 cups of water OR

3 scoops of powder to 5 cups of water

Hint: find the unit rate of scoops to water

J. Tax, Tip, Discount

1. There is a sale on sneakers at the mall. The sneakers that Joe wants are 45% off. The tax rate is 6%. How much will Joe pay for the sneakers if they were originally \$95.00?

Hint: First calculate the sale price, then add the tax.

K.

Percent Increase/Decrease

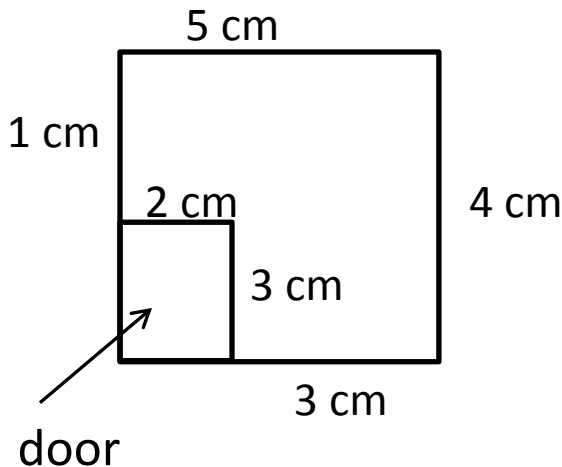
1. If the stream was 4 feet wide before the rain and 6 feet wide after the rain, what is the percent increase?
2. The price of oil went from \$54 a barrel to \$50 a barrel. What is the percent decrease?

Hint: $\frac{\textit{difference}}{\textit{original \#}}$

L. Area Task

Using the drawing below, how many square feet of wall will need to be painted?

Use scale 1cm: 3 ft.



Hint: Find the area of the drawing. Multiply that area by the scale factor squared. Do not forget units in your answer.

☐ A. Solving Proportions

1.

2.

☐ B. Unit Rate

1.

2.

3.

☐ C. Write an Equation

1.

2.

☐ D. % of a Number

1.

2.

3.

☐ E. Proportional Relationships

1.

2.

☐ F. Part to Whole Ratios

1.

2.

☐

G. Percent Problems

1.

☐

H. Commission

1.

2.

☐

I. Comparison

1.

☐

J. Tax, Tip, Discount

1.

☐

K. Percent Increase/Decrease

1.

2.

☐

L. Area Task