

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

## Solving Proportions

Solve each proportion.

1)  $\frac{10}{8} = \frac{n}{10}$

2)  $\frac{7}{5} = \frac{x}{3}$

3)  $\frac{9}{6} = \frac{x}{10}$

4)  $\frac{7}{n} = \frac{8}{7}$

5)  $\frac{4}{3} = \frac{8}{x}$

6)  $\frac{7}{b+5} = \frac{10}{5}$

7)  $\frac{6}{b-1} = \frac{9}{7}$

8)  $\frac{4}{m-8} = \frac{8}{2}$

9)  $\frac{5}{6} = \frac{7n+9}{9}$

10)  $\frac{4}{9} = \frac{r-3}{6}$

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

Algebra 1                      Worksheet: Proportions & Word Problems

**Part I:** For each word problem, first define the variable. Then write a proportion and solve. Be sure to include units in your answer.

- 1.) A girl scout troop uses 14 flashlight batteries on a three-night camping trip. If they are planning a seven-night trip, how many batteries should they bring?
  
  
  
  
  
  
  
  
  
  
- 2.) Three pumps can remove a total of 1700 gallons of water per minute from a flooded mineshaft. If engineers want to remove at least 5500 gallons per minute, how many pumps will they need operating?
  
  
  
  
  
  
  
  
  
  
- 3.) Geologists in Antarctica find an average of 7 meteorite fragments in every 500 tons of gravel they sift through. How much gravel must they sift through in order to get 100 fragments?
  
  
  
  
  
  
  
  
  
  
- 4.) A cookie recipe calls for 3 eggs and makes 4 dozen cookies.
  - a. How many (dozen) cookies could you make with a dozen eggs?
  
  
  
  
  
  
  
  
  
  
  - b. How many eggs would you need to make 18 dozen cookies?