Name: _____ Period: _____ Due: _____

Score: ___ / ___

Percent:_____ = _____ 10

PROPORTIONALITY

ASSIGNMENT 5-5
STORY TIME

SYW: NO WORK = NO CREDIT
WORK IN PENCIL ONLY!

1. Complete the proportional table below.

Pounds of Nails - x	2	3		6		10		x
Cost ($) – y			2.15	2.58	3.44		8.60	

   a. What is the Constant of Proportionality (unit rate per pound)?_____
   b. Write the equation for this relationship?_____

2. Hannah claims she can send 14 text messages in 22 minutes and wants to predict how many text messages she can send in 55 minutes if she continues at the same rate.
   a. Fill in the table below.

Messages (y)		14		28	
Minutes (x)	11	22	33		55

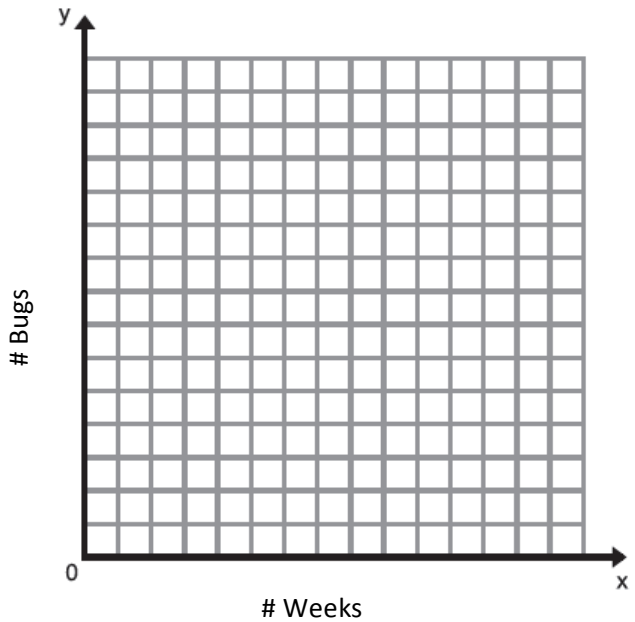
   b. Is this relationship proportional? Why or why not? _____
   _____

   c. If it is proportional, write an equation that could be used to find any number of text messages: _____

   d. If proportional, what is the constant of proportionality (unit rate per minute)?_____

3. Cameron is collecting bugs for his science class. Each week he is able to capture 6 different bugs.
   a. Complete the table and graph to show how many bugs Cameron will have after 6 weeks.

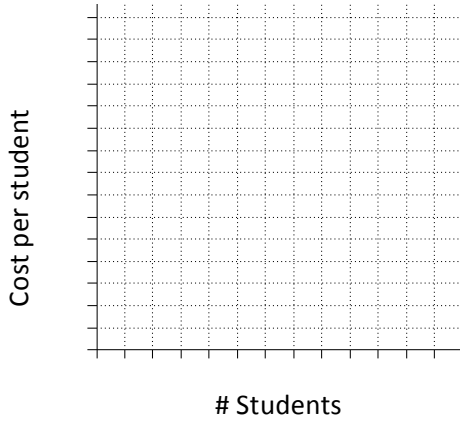
Weeks (w)	**Pattern**	**Bugs (b)**	**Short Hand**
0			
1			
2			
3			
4			
5			
6			
w			



   b. Write an equation to represent the number of bugs (b) he has collected after (*w)* weeks._____

4. The choir is planning a trip to the water park. The cost to use a school bus is $350. Complete the table below, then graph your result.

# of Students on the Trip (x)	Bus Cost per Student ($) (y)
10	35
15	
20	
35	



Is this a proportional relationship? Why or why not? _____
_____

Solve the following equations. Show your work!

5. $\frac{x}{10} = \frac{3}{10}$

6. $\frac{x}{4} = \frac{9}{3}$

7. $\frac{x}{15} = \frac{14}{15}$

8. $\frac{4}{21} = \frac{x-9}{21}$

9. $\frac{4x}{5} = \frac{28}{5}$

10. $\frac{9}{4} = \frac{x+9}{32}$

11. $\frac{6}{x} = \frac{6}{10}$

12. $\frac{3}{4} = \frac{12}{x}$

13. $\frac{4}{8} = \frac{4}{x}$

14. $\frac{15}{x-4} = \frac{5}{4}$

15. $\frac{11}{25} = \frac{11}{5x}$

16. $\frac{36}{7x} = \frac{12}{14}$