

PS #1 due tuesday



### Agenda:

- 1) Correct question #1 from lesson 6
- 2) Graph Activity- Art Gallery  
Compare/ Contrast
- 3) trail
- 4) Homework: review sheet

### "Unit Price Project"

Name: \_\_\_\_\_ date: \_\_\_\_\_  
Mrs. Bennett Math 7

#### Student Task Sheet

In the ratios and proportions unit we have been studying, you have learned to find unit rates and unit prices. You have also learned to compare unit prices.

In this assignment I am asking you to calculate the unit price of 10 different household items. Display your items on a poster. Next to each item you should include your calculations to find each unit price. Your poster should include a title as well. To go along with your poster you must write a paragraph detailing your findings? Some things you may want to include in your paragraph are which item had the lowest unit price and which item had the highest unit price. You could also compare different brands of the same item. For example, maybe Tide detergent is less expensive per ounce than All detergent. You may want to write about the usefulness of comparing unit prices.

You will be graded on:

Completion:

- Poster with title and 10 objects
- Calculations are included for each item
- Paragraph summarizing findings

Mathematical Concepts:

- Proportions showing all calculations
- Correct mathematical work
- Paragraph correctly compares items

Presentation:

- Title
- Labels
- Proportions are shown
- Paragraph has no spelling or grammatical errors

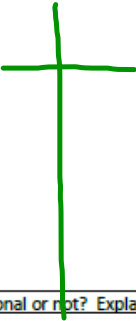
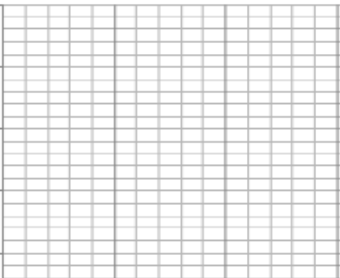
Timeliness:

- Poster is due 2 weeks from today
- Due date \_\_/ \_\_/ \_\_

Classwork

Poster Layout

Use for notes

<u>Problem</u>	<u>Table</u> 
<u>Graph</u> 	<u>Proportional or not? Explain.</u>

Gallery Walk: Take notes and answer the following questions:

- Does the graph show a proportional relationship? How do you know?
- Does the table show a proportional relationship? How do you know?
- What are the similarities/ differences between the posters?

Poster 1: - Not Proportional  
Because it doesn't meet the origin.

2/7  
Poster 2: Proportional  
because it is a constant rate

Poster 3: not proportional  
not a straight line

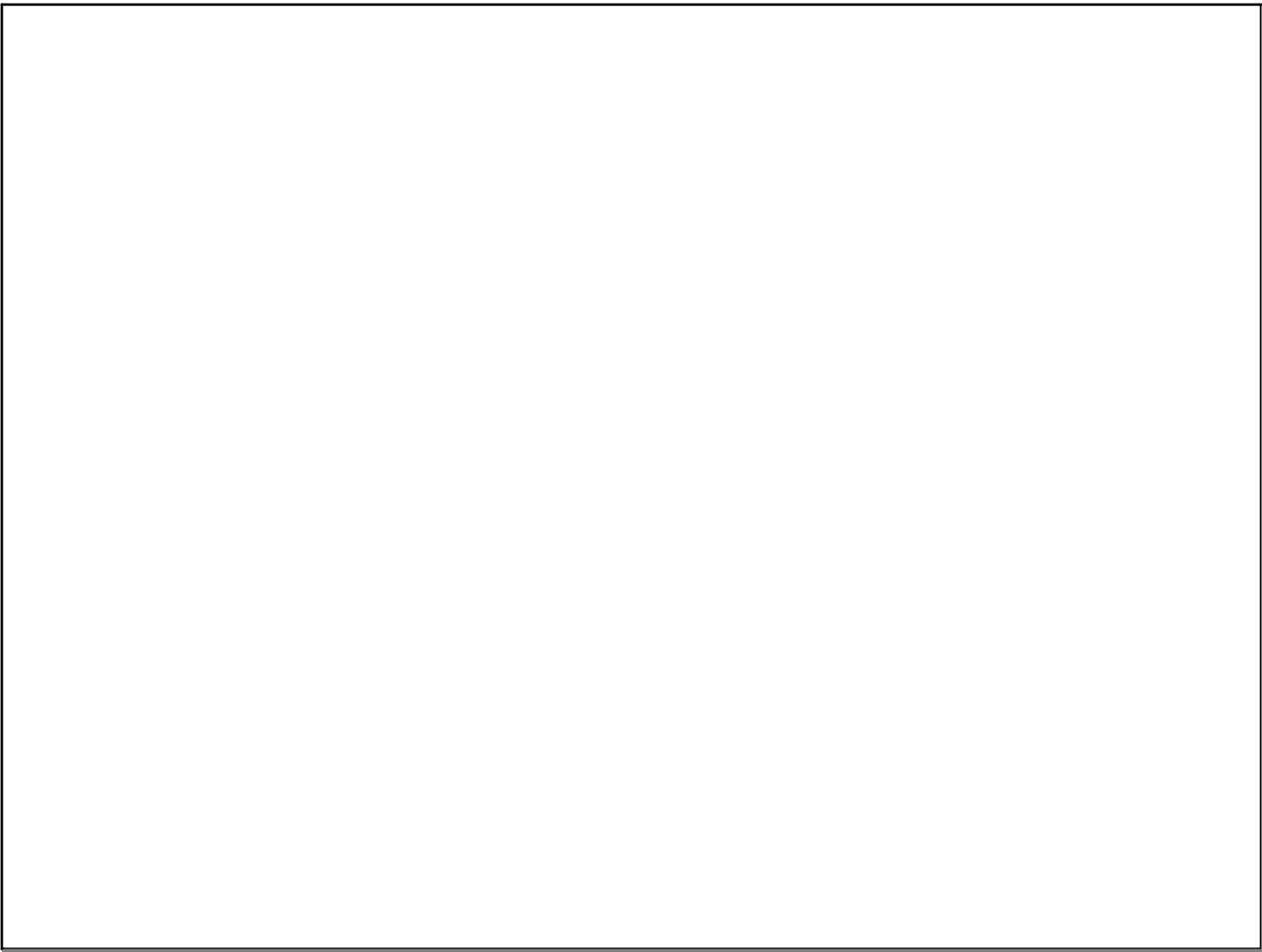
4  
not prop.

Poster 5  
Nonproportional  
not a straight line.

6 not proportional  
does not hit origin

7  
proportional

8  
not proportional



Lesson Summary:

Graphs of Proportional Relationships: The graph of two quantities that are proportional fall on a straight line that passes through the origin.

**Note about Lesson Summary**

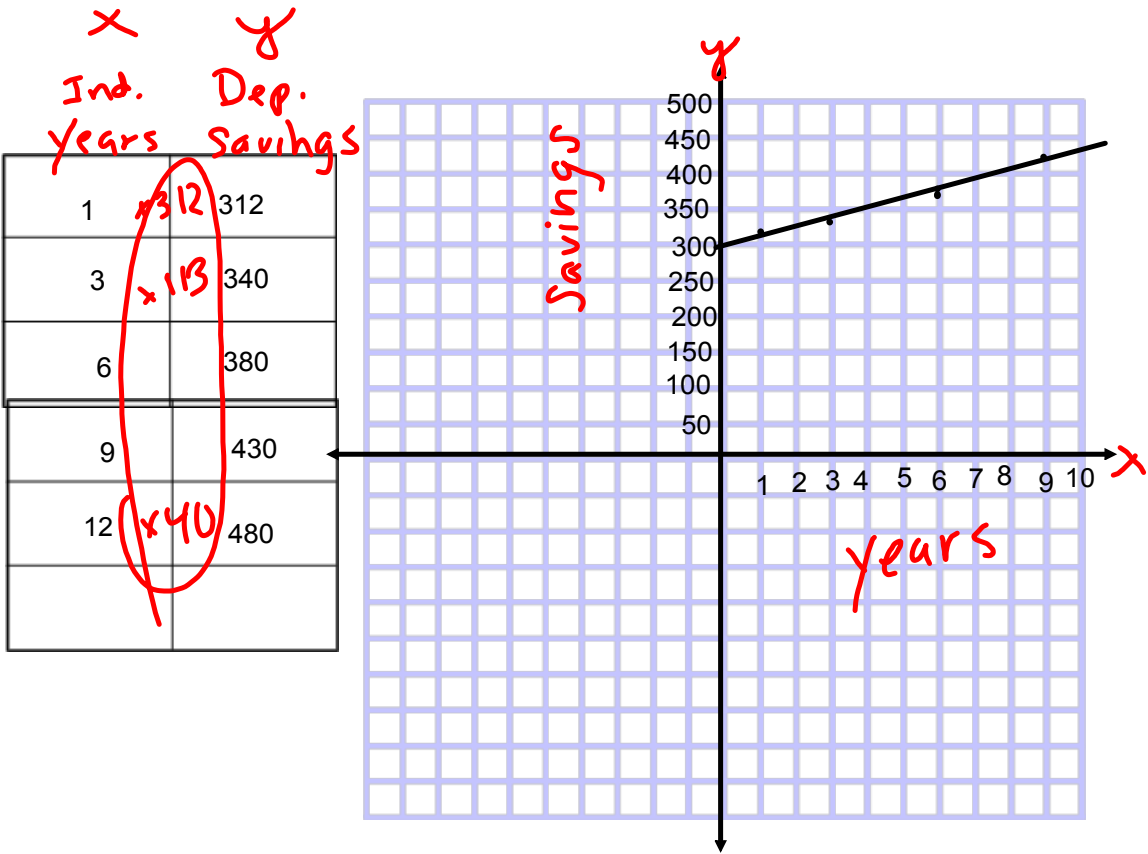
**Problem Set**

1. Sally's aunt put money in a savings account for her on the day Sally was born. The savings account pays interest for keeping her money in the bank. The ratios below represent years to amount of money in her savings account.
  - After one year, the interest had accumulated and the total was \$312 in Sally's account.
  - After three years, the total was \$340. After six years, the total was \$380.
  - After nine years, the total was \$430. After 12 years, the total amount in Sally's savings account was \$480.

Using the same four-fold method from class, create a table then graph and determine whether the amount of money accumulated and time elapsed are proportional to each other or not. Use your table and graph to support your reasoning.

The relationship is not proportional because though the graph is a straight line, it does not pass through the origin (0,0). By looking at the table I can also say that the relationship is not proportional because there is not a constant number that the years are multiplied by to get the amount of money.

work:  $312/1 = 312$   
 $340 / 3 = 113.33$   
 $380/6 = 63.33$   
 $430/9 = 47.77$   
 $480/12 = 40$



## Ratio and Proportions Quiz 1 Review

Name \_\_\_\_\_

1. What is a ratio? Show 2 ways to write the ratio of 3 boys to 4 girls.

comparison  
of 2 things      3:4      3 to 4       $\frac{3}{4}$

2. What is a *unit rate*?

- ratio with denominator of 1  
- used to compare

3. At Dunkin Donuts, it costs \$4.99 for a dozen donuts. To the nearest cent, what is the cost of one donut?

$$\frac{4.99}{12} = \$ .42$$

4. Kelly can type 240 words in 5 minutes and Jessica can type 315 words in 7 minutes. Who is the faster typist? Show your work and explain how you know your answer is correct.

$$\text{Kelly } \frac{240}{5} = 48$$

$$\text{Jessica } \frac{315}{7} = 45$$

5. Helen made pink icing for her Christmas cookies by mixing the following.

Red Dye (drops)	6	8	10
Icing (cups)	1.5	2.5	3.5

The amount of ~~blue paint~~ <sup>Red dye</sup> is not <sup>icing</sup> proportional to amount of ~~yellow paint~~.

6. A container leaks  $\frac{6}{8}$  gallons in  $\frac{1}{3}$  of an hour. What is the rate that the container leaks in gallons per hour? <sup>equivalent ratios or table</sup>

$$\frac{\frac{6}{8} \text{ gal}}{\frac{1}{3} \text{ hr}} \times 3 = \frac{2\frac{1}{4} \text{ gal}}{1 \text{ hr}}$$

$$\frac{6}{8} \times \frac{3}{1} = \frac{18}{8} = 2\frac{1}{4}$$

7. Sarah can write  $1\frac{1}{2}$  pages in 3 minutes. How many pages can she write in 12 minutes?

$$\frac{1\frac{1}{2} \text{ pgs}}{3 \text{ min}} \times 4 = \frac{6}{12 \text{ min}}$$

8. Complete the table showing the cost for a given number of rides at the fair.

Number of Rides	Cost
1	$\times 3$ 3
2	$\times 3$ 6
3	9
4	12
5	15

9. Graph the relationship on the grid.  
Be sure to label the axes.

10. Is this a proportional relationship?  
Explain your answer.

yes -  
Straight line  
through (0,0)

11. What does the point  
(4, 12) represent?

4 rides cost \$12

12. If you go on 8 rides, what will the cost be?

$$8 \times 3 = \$24$$

