Name:	Date:

Unit 3 Lesson 2 Guided Notes

Unit Guiding Question	*When and why do I use proportional comparisons?*
Objective	I can use tables and graphs to determine whether two variables (x & y) exhibit a proportional relationship.

Directions: As you go through the PPT and watch the video made by your teacher, complete the guided notes below to ensure your understanding of the content. Be sure to challenge yourself and persevere through new concepts. ***If you have a question:*** *1) Re-watch the video 2) Ask a friend 3) Ask your teacher*

What is a proportion?

A _____ is two equal ratios. It can be written in two ways: two equal fractions or by using a colon.

$$1{:}10 \ = \ 2{:}20 \qquad\qquad 4/6 \ = \ 2/3$$

We can use _____ to create proportional ratios or determine if ratios are equal.
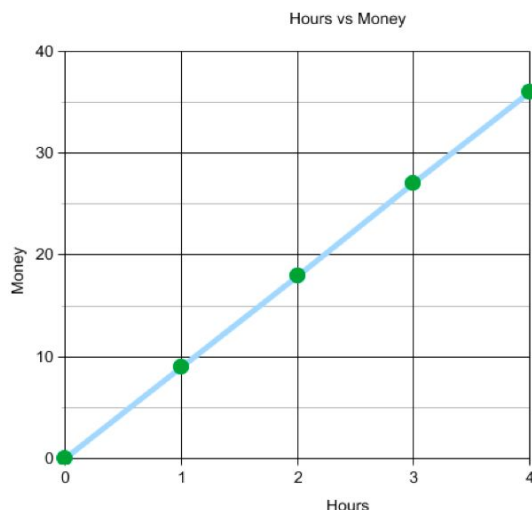

Proportional relationships with graphs

What is the unit rate of this table? _____

Is this table proportional? Explain. _____

_____

We can also see proportional relationships in graphs.
<u>Hours Vs. Money Graph:</u>

Hours	Money
0	$0
1	$9
2	$18
3	$27
4	$36

Hours (x) : Money (y)

Independent variable(x) = Hours
Dependent variable(y) = Money

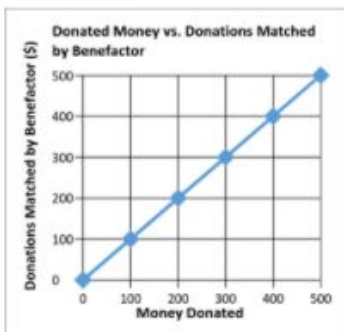**How can we determine if a graph is proportional?**

<u>Two main rules</u>:

1. The line graph passes through _____.

2. The line graph is _____ and increases _____.

Graph A

Age vs. Admission Price

Admission Price ($) vs. Age (years)

Graph B

Donated Money vs. Donations Matched by Benefactor

Donations Matched by Benefactor ($) vs. Money Donated

Graph C

Extra Credit vs. Number of Problems
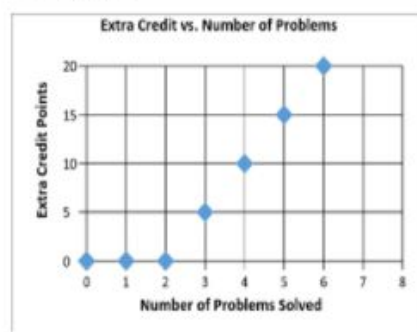

Extra Credit Points vs. Number of Problems Solved

Explain your graph selection and why the graph(s) are proportional:

_____

_____

How can you find the unit rate of a proportional table?

Steps:

1. Check if the _____ ratio can be reduced.

2. If so, the reduced term is your _____.

3. If not, the first _____ is your unit rate.

4. Lastly, check _____ in the table are

    _____ to your unit rate.

x	y
0	0
2	16
4	32
6	48
8	64

How can you find the unit rate of a proportional graph?

Steps:
1. First, write _____ in a table.
2. Use the same steps as determining _____.

3. What is the unit rate of the graph to the right? _____

Number of weeks (x)	Total savings (y)

Money

Total Savings ($) vs. Number of Weeks