March 26, 2018

UNIT 6: LINEAR RELATIONS

4.4: MATCHING EQUATIONS AND GRAPHS

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MATH 9

WHAT'S THE POINT OF TODAY'S LESSON?

We will continue working on the Math 9 Specific Curriculum Outcome (SCO) "Patterns and Relations 2" OR "PR2" which states:

"Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems."

Warm-Up Grade 9

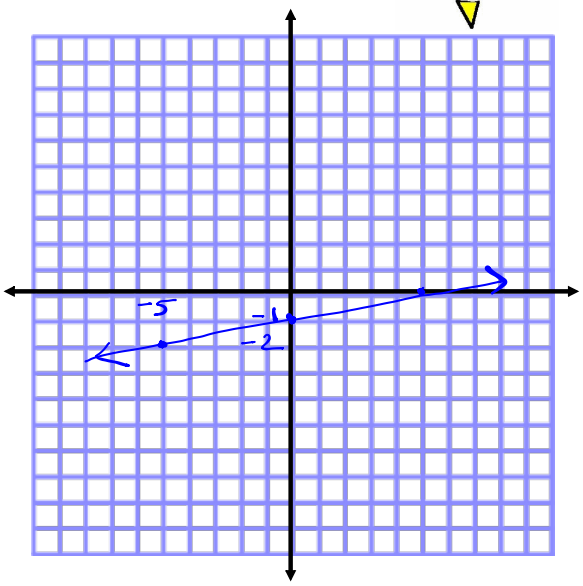
Graph the following equation. If you use a table of values, choose "nice" numbers for x.)

$\frac{1}{5}x - y = 1$

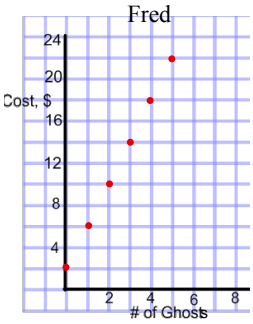
$-y = -\frac{1}{5}x + 1$

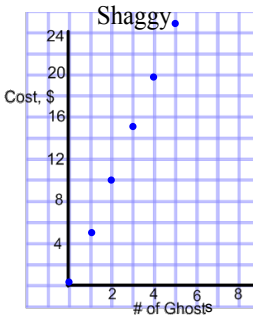
$y = \frac{x}{5} - 1$

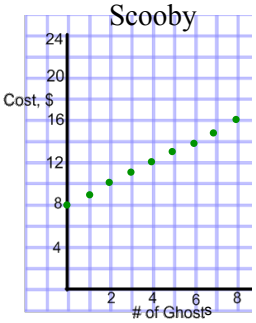
x	y
-5	-2
0	-1
5	0



Fred, Shaggy and Scooby are hired to find ghosts. Each ghost hunter charges a different rate. These graphs show how the cost is related to the number of ghosts caught.







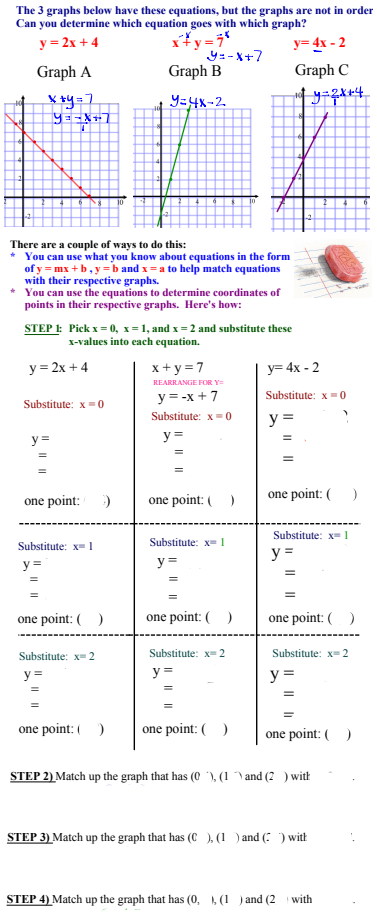
Match each graph with its equation:

C = g + 8 **C = 5g** **C = 4g + 2**

Explain your strategy:

*** Did you plug in a value for 'g' and see what 'C' is? (ex: g = 1)**

*** Did anyone use a different strategy?**



The 3 graphs below have these equations, but the graphs are not in order
Can you determine which equation goes with which graph?

y = 2x + 4 | x + y = 7 | y= 4x - 2

Graph A | Graph B | Graph C

There are a couple of ways to do this:

* You can use what you know about equations in the form of y = mx + b , y = b and x = a to help match equations with their respective graphs.
* You can use the equations to determine coordinates of points in their respective graphs. Here's how:

STEP 1: Pick x = 0, x = 1, and x = 2 and substitute these x-values into each equation.

y = 2x + 4	x + y = 7	y= 4x - 2
Substitute: x = 0 y = = = one point: ( )	REARRANGE FOR Y= y = -x + 7 Substitute: x = 0 y = = = one point: ( )	Substitute: x = 0 y = = = one point: ( )
Substitute: x= 1 y = = = one point: ( )	Substitute: x= 1 y = = = one point: ( )	Substitute: x= 1 y = = = one point: ( )
Substitute: x= 2 y = = = one point: ( )	Substitute: x= 2 y = = = one point: ( )	Substitute: x= 2 y = = = one point: ( )

STEP 2) Match up the graph that has (0), (1) and (2) with .

STEP 3) Match up the graph that has (0), (1) and (2) with .

STEP 4) Match up the graph that has (0,), (1) and (2 with .

CONCEPT REINFORCEMENT:

MMS9:

page 188: #3 TO #5
page 189: #6 TO #9
page 190: #11 TO #13