

HW: Worksheet

Warm up

Graph.

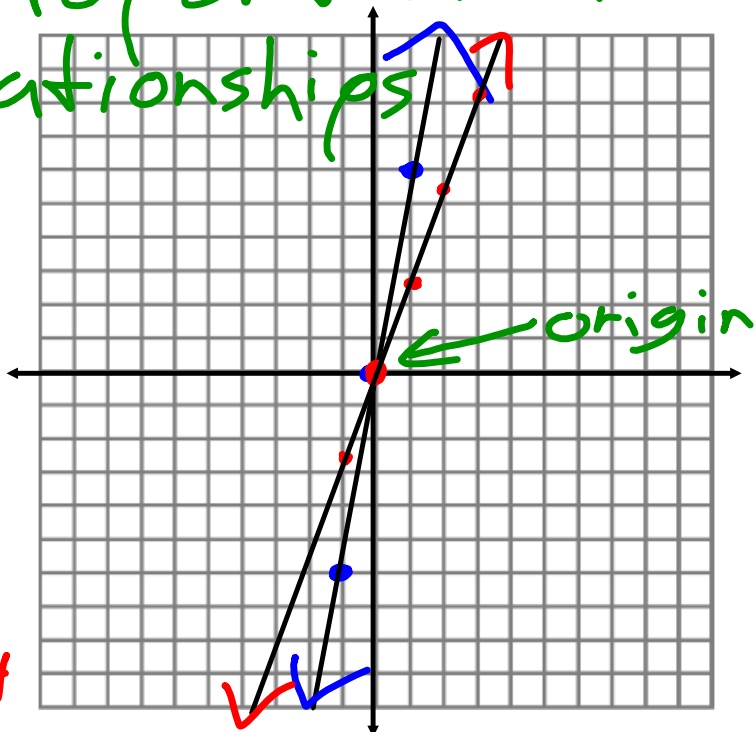
proportional relationships

1) $y = 6x$

x	6x	y
0	6(0)	0
1	6(1)	6
-1	6(-1)	-6

2) $y = 2.7x$

x	2.7x	y
0	2.7(0)	0
1	2.7(1)	2.7
2	2.7(2)	5.4
3	2.7(3)	8.1
-1	2.7(-1)	-2.7



Write and graph a function to model the situation.

You are selling lemonade for \$2.75 per cup.

$y = 2.75x$

↑ total \$ ↑ # of cups

x	$2.75x$	y
0	$2.75(0)$	0
1	$2.75(1)$	2.75
2	$2.75(2)$	5.5
3	$2.75(3)$	8.25
-1	$2.75(-1)$	-2.75

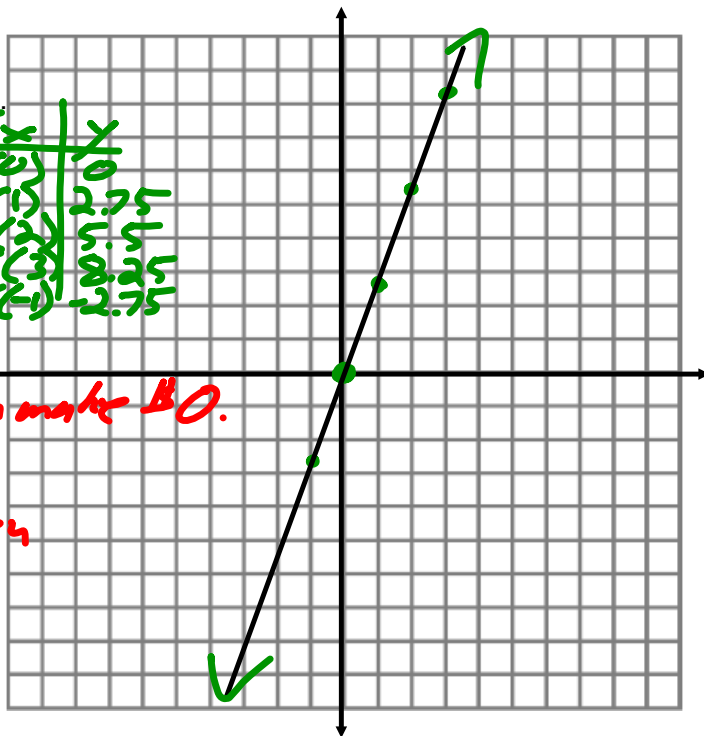
What do x and y represent?

What does the point (0,0) mean?

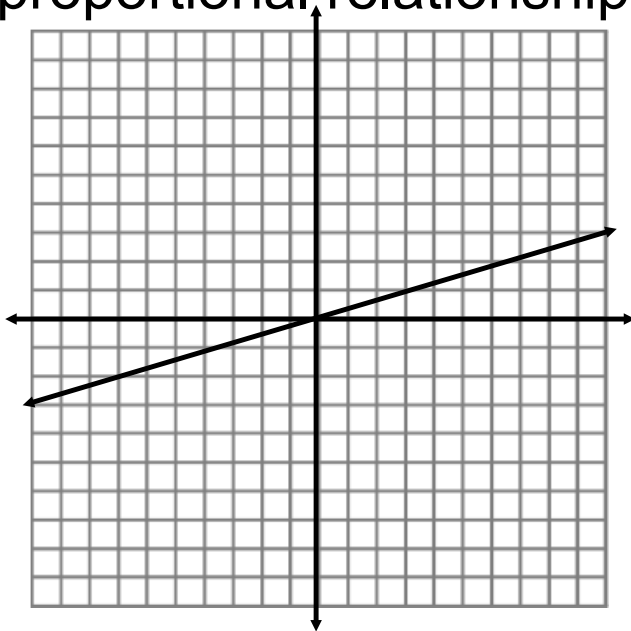
If you sell 0 cups, you make \$0.

What does the point (1, 2.75) mean?

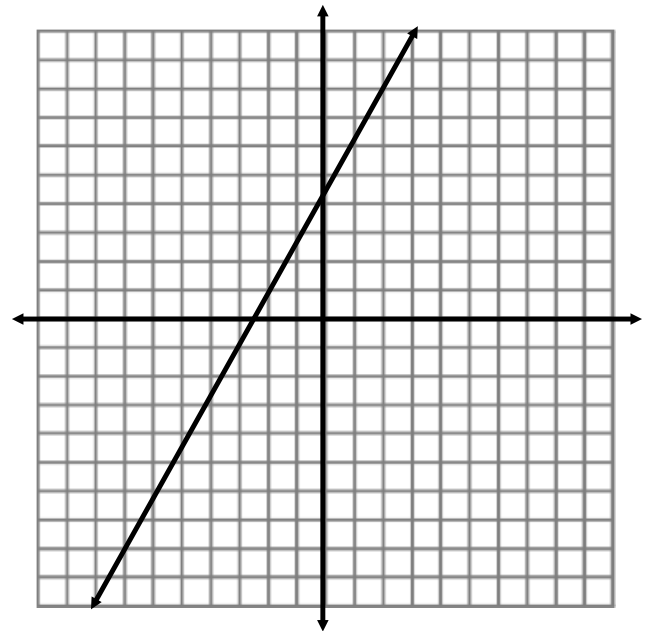
If you sell 1 cup, you make \$2.75



Determine if each graph represents a proportional relationship.



yes



no

Proportional relationships can always be written in the form...

$$y = kx$$

Are the following functions proportional relationships?

$$y = 4x + 7 \quad \text{no}$$

$$y = 9x \quad \text{yes}$$

$$y = 3x^2 \quad \text{no}$$

$$4x = y \quad \text{yes}$$

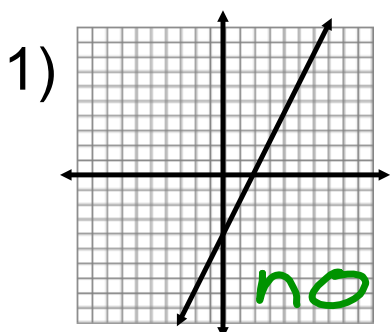
How could we tell if this is a proportional relationship?

x		y
2	$\times 4$	8
3	$\times 4$	12
4	$\times 4$	16
5	$\times 4$	20

$$y = \underline{\quad} x$$

yes

Determine if the following functions are proportional relationships.



2) $y = 2 - 8x$ *no*

3) $y = 2.76x$ *yes*

4) $y = x$ *yes*

5) $y = 2x + 1$ *no*

6) $y = 7x$ *yes* $\frac{10}{4} = \frac{5}{2}$

7)

x	y
5 <i>x 2</i>	10
7 <i>x 2</i>	14
8 <i>x 2</i>	16
15 <i>x 2</i>	30

yes

8)

x	y
1 <i>x 5</i>	5
2 <i>x 4</i>	8
3	11
4	14

no

9)

x	y
4 <i>x 2.5</i>	10
6 <i>x 2.5</i>	15
8 <i>x 2.5</i>	20
10 <i>x 2.5</i>	25

yes

