

Get out your blendspace box 2 even number worksheet homework and review it with your group.

Pick up a representing linear equations worksheet and begin filling in the missing columns.

Recall:

- 1) Slope-intercept form is $y = mx + b$
- 2) The **x-intercept** is found by **substituting 0** in for y and solving the equation or finding it from the graph. (y-int. from the graph or substituting 0 in for x)
- 3) Standard form: $Ax + By = C$, where A is positive and A, B, and C are not fractions.
- 4) To graph, **b** is where you **begin** on the y-axis
m is where you **move** after writing the number as a fraction

You will have twenty minutes to work on this with your groups when class starts.

Equations	Table	Graph	Intercepts/Slope												
Standard Format: $\underline{2x - y = -2}$	<i>substitute</i> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-1</td> <td>0</td> </tr> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>1</td> <td>4</td> </tr> <tr> <td>-3</td> <td>-4</td> </tr> <tr> <td>3</td> <td>8</td> </tr> </tbody> </table>	x	y	-1	0	0	2	1	4	-3	-4	3	8		x-intercept = $(-1, 0)$ y-intercept = $(0, 2)$ $m = 2$
x	y														
-1	0														
0	2														
1	4														
-3	-4														
3	8														
Slope Intercept Format: $y = 2x + 2$															

$$2x - y = -2$$

$$-y = -2x - 2$$

$$y = 2x + 2$$

$$m = 2 \quad b = 2$$

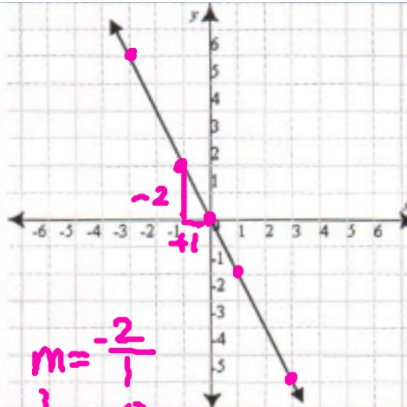
Standard Format:

$$2x + y = 0$$

Slope Intercept Format:

$$y = -2x$$

x	y
0	0
-1	2
1	-2
-3	6
3	-6



x-intercept = (0, 0)

y-intercept = (0, 0)

m = -2

$$y = -2x$$
$$2x + y = 0$$

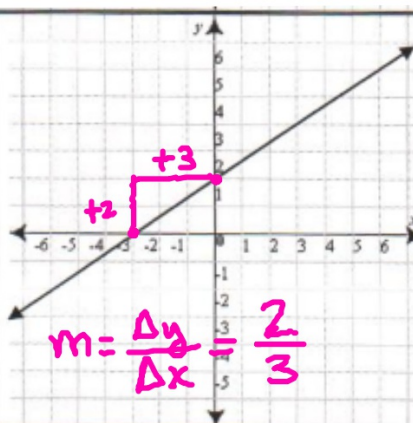
Standard Format:

$$2x - 3y = -6$$

Slope Intercept Format:

$$y = \frac{2x}{3} + 2$$

x	y
-3	0
0	2
3	4
-6	-2
6	6



x-intercept = $(-3, 0)$

y-intercept = $(0, 2)$

$$m = \frac{2}{3}$$

$$y = \frac{2}{3}x + 2$$

$$3y = 2x + 6$$

$$-2x + 3y = 6$$

$$2x - 3y = -6$$

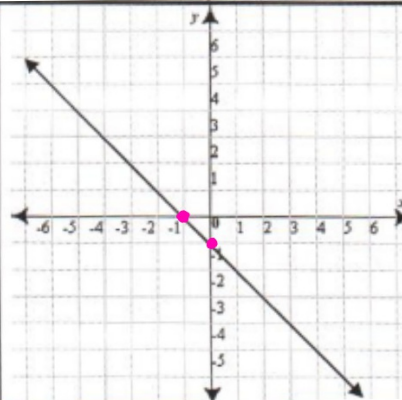
Standard Format:

$$x + y = -1$$

Slope Intercept Format:

$$y = -x - 1$$

x	y
-1	0
0	-1
1	-2
-3	2
3	-4



x-intercept = (-1, 0)

y-intercept = (0, -1)

m = -1

$$y = -x - 1$$

$$m = \frac{\Delta y}{\Delta x} = \frac{-1}{1} = -1$$

$$b = -1$$

$$x + y = -1$$

To graph linear equations, we begin with b the y -intercept and move with the slope m .

First, we need to write the equation in slope-intercept form.

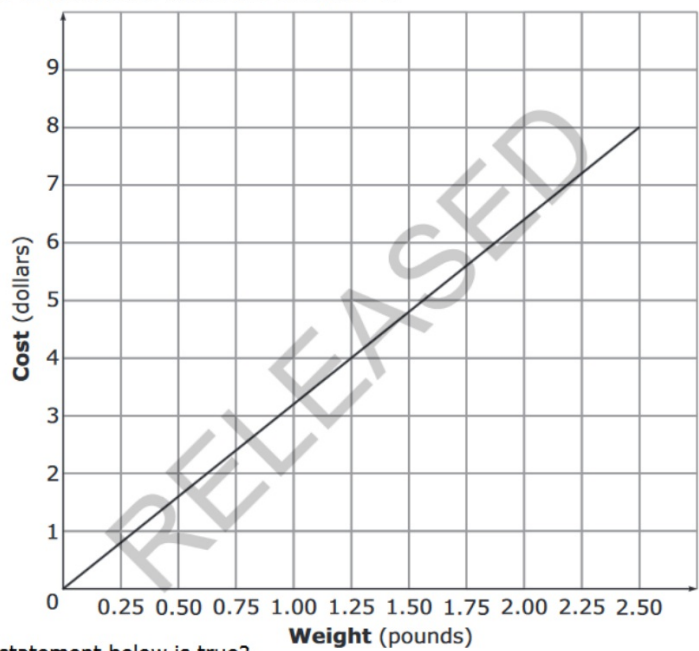
Second, plot the y -intercept.

Third, move the direction the slope tells us from the y -intercept.

To compare two linear equations, we must find the equation of both sets of data and then compare the information we are asked about.

20 Two stores sell cherries at different prices per pound.

- Store P sells 3.5 pounds of cherries for \$13.30.
- The graph below shows the cost to purchase different weights of cherries at Store Q.



Phillip needs to purchase 10 pounds of cherries. Which statement below is true?

- A Phillip will spend \$8.00 less on cherries at Store P than at Store Q.
- B Phillip will spend \$8.00 more on cherries at Store P than at Store Q.
- C Phillip will spend \$6.00 less on cherries at Store P than at Store Q.
- D Phillip will spend \$6.00 more on cherries at Store P than at Store Q.

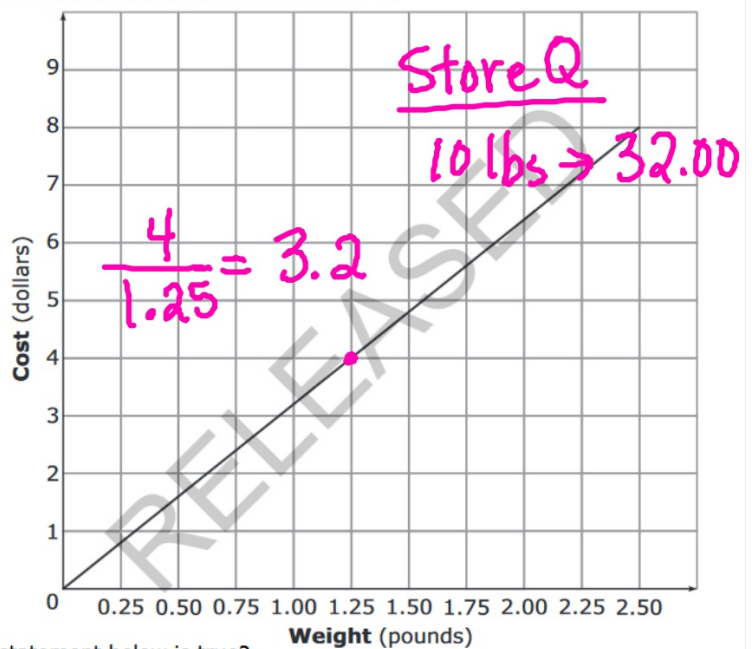
20 Two stores sell cherries at different prices per pound.

- Store P sells 3.5 pounds of cherries for \$13.30.
- The graph below shows the cost to purchase different weights of cherries at Store Q.

Store P

$\frac{13.30}{3.5} = 3.8$

Store P - 10lbs
is
\$38.00



Phillip needs to purchase 10 pounds of cherries. Which statement below is true?

- ~~A~~ Phillip will spend \$8.00 less on cherries at Store P than at Store Q.
- ~~B~~ Phillip will spend \$8.00 more on cherries at Store P than at Store Q.
- C Phillip will spend \$6.00 less on cherries at Store P than at Store Q.
- D Phillip will spend \$6.00 more on cherries at Store P than at Store Q.

- 21 Limousine Company P and Company R both charge a rental fee plus an additional charge per hour.
- The equation $y = 50 + 30x$ models the total cost (in dollars), y , of renting a limousine from Company P for x hours.
 - The table below shows the cost to rent a limousine from Company R for different lengths of time.

Company R

Time (hours)	1	2	3	4	5
Total Cost	\$100	\$125	\$150	\$175	\$200

Which statement accurately compares the per hour charges of the two companies?

- A Company P charges \$5 less per hour than Company R.
- B Company P charges \$5 more per hour than Company R.
- C Company P charges \$25 less per hour than Company R.
- D Company P charges \$25 more per hour than Company R.

21 Limousine Company P and Company R both charge a rental fee plus an additional charge per hour.

- The equation $y = 50 + 30x$ models the total cost (in dollars), y , of renting a limousine from Company P for x hours.
- The table below shows the cost to rent a limousine from Company R for different lengths of time.

$y = 30x + 50$

$y = 25x + 75$

Company R

Time (hours)	1	2	3	4	5
Total Cost	\$100	\$125	\$150	\$175	\$200



$m = 25$
 $b = 75$

Which statement accurately compares the per hour charges of the two companies?

- A Company P charges \$5 less per hour than Company R.
- B Company P charges \$5 more per hour than Company R.
- C Company P charges \$25 less per hour than Company R.
- D Company P charges \$25 more per hour than Company R.

-25 $+25$ $+25$ $+25$ $+25$
slope

- 22 In which function table do all of the points (x, y) lie on the line that has a slope of 3 and a y -intercept of 2?

A

x	y
-1	-1
2	8
5	17
8	26

B

x	y
-1	-1
2	7
5	17
8	26

C

x	y
-1	-1
2	8
5	18
8	26

D

x	y
-1	-1
2	8
5	17
8	25

- 22 In which function table do all of the points (x, y) lie on the line that has a slope of 3 and a y-intercept of 2?

$$y = 3x + 2$$

A

x	y
-1	-1
2	8
5	17
8	26

x	y
-1	-1
2	7
5	17
8	26



~~B~~

x	y
-1	-1
2	8
5	18
8	26

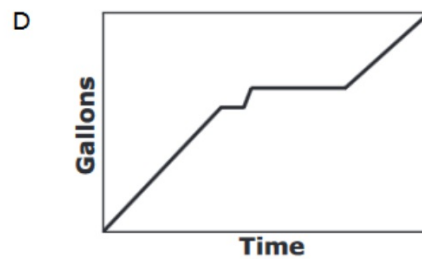
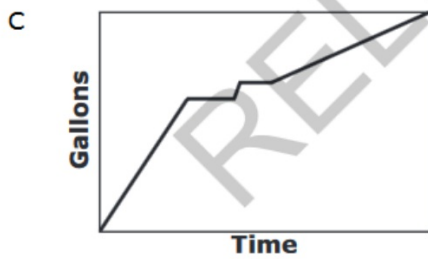
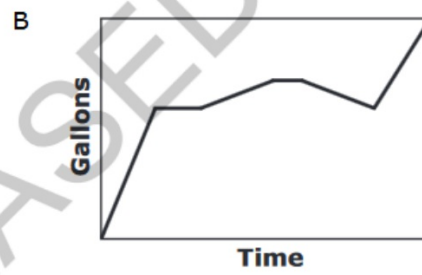
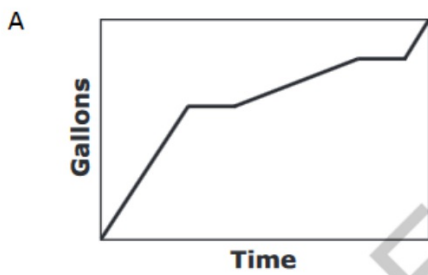
~~C~~

x	y
-1	-1
2	8
5	17
8	25

23 Mr. Jones filled his swimming pool with water.

- Mr. Jones began filling the pool at a constant rate.
- He turned off the water for a while.
- He then turned the water back on at a slower constant rate.
- Mr. Jones turned off the water again for a while.
- He then turned the water back on at the first rate.

Which graph **best** represents Mr. Jones filling the pool?



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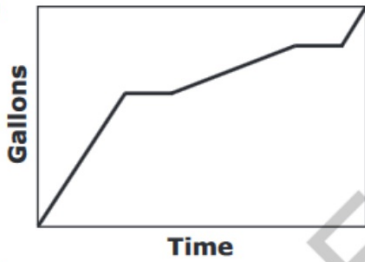
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less steep

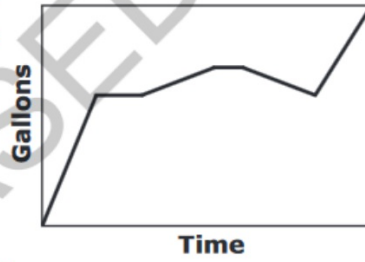


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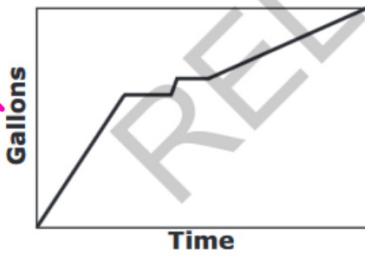
A



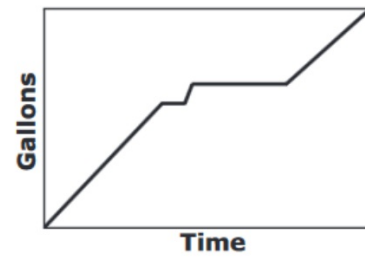
~~B~~



~~C~~



~~D~~



Get out your chromebook. Go to the following address:

<http://learnzillion.com/lessonsets/275>

Watch all five videos that are listed to review then begin the homework.

Comparing Linear Equations Homework Worksheet