Assignment Self-Monitoring Sheet

Welcome 9th Grade!	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: 9/11 Topic: No Homework	0 1 2	I read more about Dr. Okikiolu
Tuesday Date: 9/12 Topic: Gradient Practice	0 1 2	
Wednesday Date: 9/13 Topic: Equations of a line (Grad/Int Form & Standard)	0 1 2	
Thursday Date: _____ Topic: _____	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

Class Plan:

1. Warm-up
2. How many points to graph a line?
3. Joke :)
4. Graphing from different forms.
5. Practice

Warm-up:

Adrian is running a concession stand at the football game. He sells hotdogs for $4 and sodas for $2. Write an equation to model Adrian's earnings.

y: # of hotdogs
x: # of sodas

$4y+2x=80$

(0,20) (10,15) (18,11)

If he wants to make $80, how can he do this?

Done? How can a graph show his earnings?

Warm-up:

Adrian is running a concession stand at the football game. He sells hotdogs for $4 and sodas for $2.
Write an equation to model Adrian's earnings.

Hotdogs	Sodas	Total Sales

Done? How can a graph show his earnings?
If he wants to make $80,

Warm-up:

Adrian is running a concession stand at the football game. He sells hotdogs for $4 and sodas for $2.
Write an equation to model Adrian's earnings.

General Form
$4x + 2y = 80$

-->Gradient-Intercept Form

$4x + 2y = 80$

$2y = -4x + 80$

$y = -2x + 40$

Hotdogs	Sodas	Total Sales
1	38	4(1)+38(2)
2	36	4(2)+36(2)
3	34	4(3)+34(2)
4	32	....
5	30	....
6	28	
7	26	

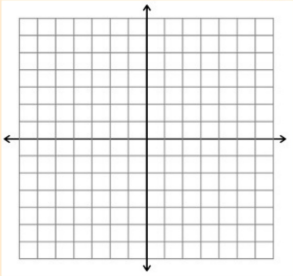
Done? How can a graph show his earnings?
If he wants to make $80,

F GRAPHING LINES FROM EQUATIONS

How many points of a line do we need in order to graph it?

Video Graphing Example

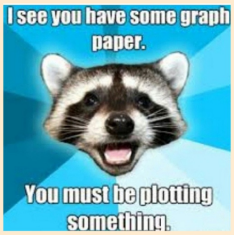
How can we graph $y = 3x - 9$?



https://www.youtube.com/watch?v=6m642-2D3V4

Joke break!

I'll do algebra, I'll do trig, and I'll even do statistics, but graphing is where I draw the line!

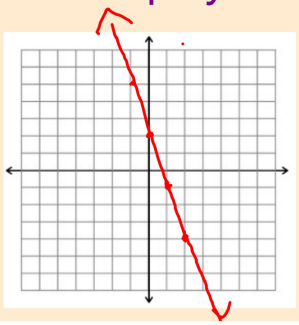


GRAPHING LINES IN GRADIENT-INTERCEPT FORM

To draw the graph of $y = mx + c$ we:

- Use the y-intercept c to plot the point $(0, c)$.
- Use x and y-steps from the gradient m to locate another point on the line.
- Join the two points and extend the line in either direction.

Ex.: Graph $y = -3x + 2$ (Use equation to draw line)

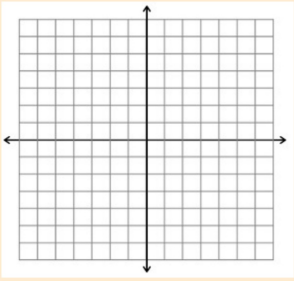


$m = \frac{-3}{1}$ $\frac{\text{dn } 3}{\text{rt } 1}$

y-int: (0,2)

$m = \frac{3}{-1}$ $\frac{\text{up } 3}{\text{lt } 1}$

Graph $y = -3x + 2$



(Using a table/ finding points)

f(-2) = -3(-2)+2
f(-2) = 8
(-2,8)

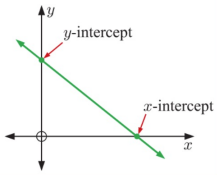
f(-1) = -3(-1)+2
f(-1) = 5
(-1,5)

f(0) = -3(0)+2
f(0) = 2
(0,2)

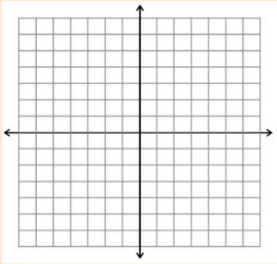
GRAPHING LINES IN GENERAL FORM

To draw the graph of a line in the general form $Ax + By = C$, we:

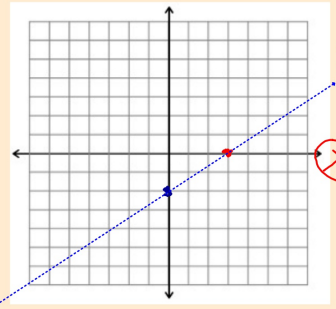
- Find the y-intercept by letting $x = 0$.
- Find the x-intercept by letting $y = 0$.
- Join the points where the line cuts the axes and extend the line in either direction.



Ex.: Graph $2x - 3y = 6$



Graph $2x - 3y = 6$



$(x, 0)$

$2x - 3(0) = 6$

$\frac{2x}{2} = \frac{6}{2}$

$x = 3$

$(3, 0)$

$(0, y)$

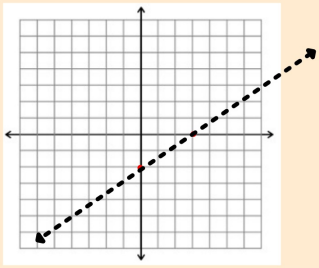
$2(0) - 3y = 6$

$\frac{-3y}{-3} = \frac{6}{-3}$

$y = -2$

$(0, -2)$

Graph $2x - 3y = 6$



$2(0) - 3y = 6$
$-3y = 6$
$y = -2$
$(0,-2)$

$2x - 3(0) = 6$
$2x = 6$
$x = 3$
$(3,0)$

Exercises for tonight:

Graphing Lines WS

Garages 3:10 -4:30

Need Graph Paper!

8F.1 #1(a,c,f,h), 2(a,b), 3

Twinning! :)
Join the
math team!

8F.1 #1(a,c,f,h), 2(a,b), 3

1 Draw the graph of:

a $y = 2x + 1$ **b** $y = 3x - 1$ **c** $y = \frac{2}{3}x$ **d** $y = \frac{4}{3}x - 2$

e $y = -x + 4$ **f** $y = -2x + 2$ **g** $y = -\frac{1}{2}x - 1$ **h** $y = -\frac{2}{5}x - 3$

2 Draw the graph of:

a $x + 3y = 6$ **b** $3x - 2y = 12$ **c** $2x + 5y = 10$

d $4x + 3y = 6$ **e** $x + y = 5$ **f** $x - y = -3$

g $3x - y = -6$ **h** $7x + 2y = 14$ **i** $4x + 9y = -18$

3 Consider the line with equation $y = -\frac{2}{3}x + 4$.

a Find the: **i** gradient **ii** y-intercept.

b Determine whether the following points lie on the line:

i $(-3, 6)$ **ii** $(2, 2)$ **iii** $(8, -\frac{4}{3})$

c Draw the graph of the line, showing your results from **a** and **b**.

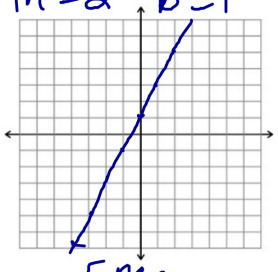
8F.1 #1(a,c,f,h), 2(a,b), 3

1 Draw the graph of:

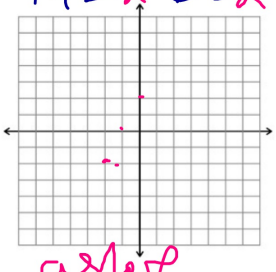
a $y = 2x + 1$ **b** $y = 3x - 1$ **c** $y = \frac{2}{3}x$ **d** $y = \frac{4}{3}x - 2$

e $y = -x + 4$ **f** $y = -2x + 2$ **g** $y = -\frac{1}{2}x - 1$ **h** $y = -\frac{2}{5}x - 3$

m=2 b=1



m=-2 b=2



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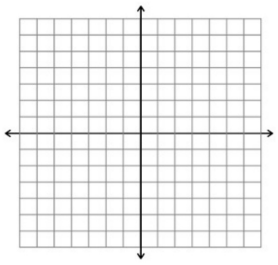

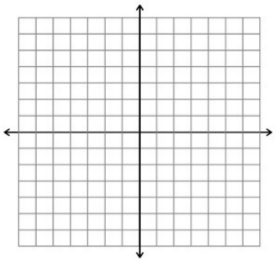

8F.1 #1(a,c,f,h), 2(a,b), 3

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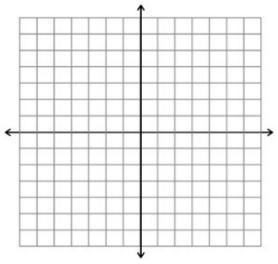
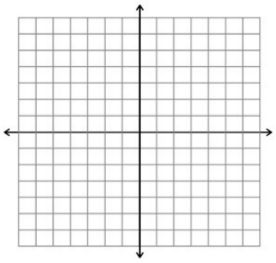
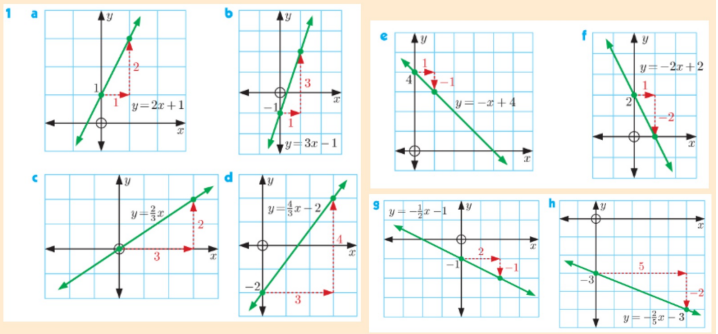
e $y = -x + 4$ **f** $y = -2x + 2$ **g** $y = -\frac{1}{2}x - 1$ **h** $y = -\frac{2}{5}x - 3$

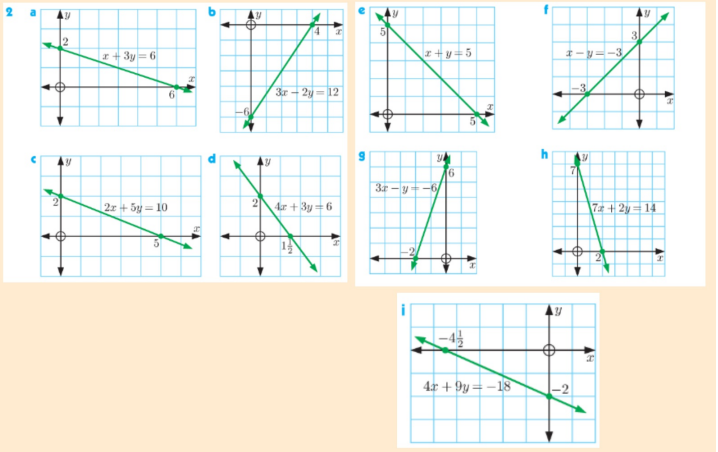




8F.1 Answers



8F.1 Answers



8E.1 Answers

3 **a** **i** $-\frac{2}{3}$

ii 4

b **i** yes

ii no

iii yes

c