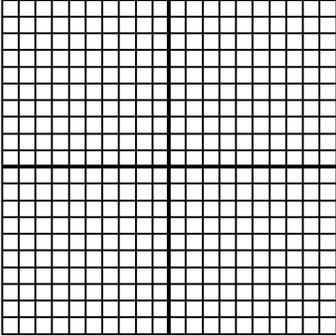
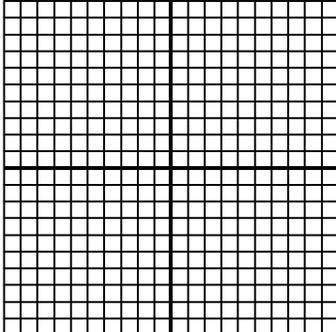
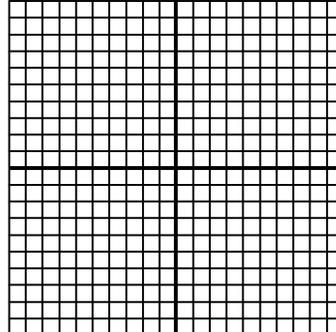
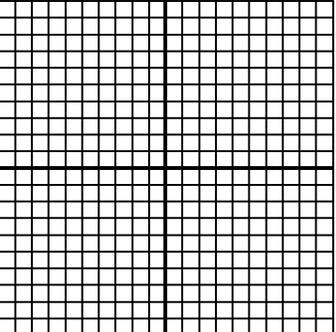
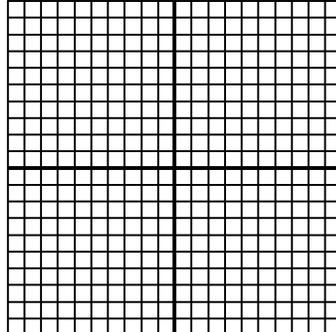


A 7-1 Calculate the slope.

$\text{slope} = \frac{\text{rise}}{\text{run}} =$	<p>(-2, -3) (3, 7)</p> 	$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1} =$	<p>(-3, -5) (6, 13)</p>
---	--	--	-------------------------

A 7-1 Name \_\_\_\_\_ BDFM? \_\_\_\_\_ Why? \_\_\_\_\_

Use the graph to find the slope between the points. Simplify the slope.

<p>1. (1, 3) (4, 9)</p> 	<p>2. (0, 1) (4, 3)</p> 	<p>3. (1, 4) (5, 0)</p> 	<p>4. (2, 4) (8, 1)</p> 
---	--	---	--

Calculate and simplify the slope.

<p>5. (1, 3) (4, 9)</p>	<p>6. (3, 7) (8, 17)</p>	<p>7. (-3, -5) (3, 7)</p>	<p>8. (-6, -11) (2, 5)</p>
<p>9. (0, 1) (4, 3)</p>	<p>10. (6, 4) (14, 8)</p>	<p>11. (-4, -1) (8, 5)</p>	<p>12. (-6, -2) (0, 1)</p>
<p>13. (1, 4) (5, 0)</p>	<p>14. (4, 1) (7, -2)</p>	<p>15. (3, 2) (9, -4)</p>	<p>16. (-3, 8) (6, -1)</p>

17. (2, 4) (8, 1)

18. (4, 3) (10, 0)

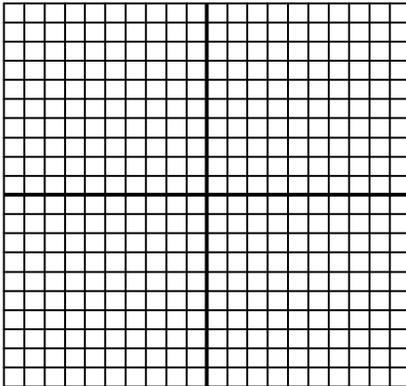
19. (-2, 6) (12, -1)

20. (-4, 7) (14, -2)

25. Find the POI  $y = x - 7$  and  $y = -3x + 5$  by...

...graphing.

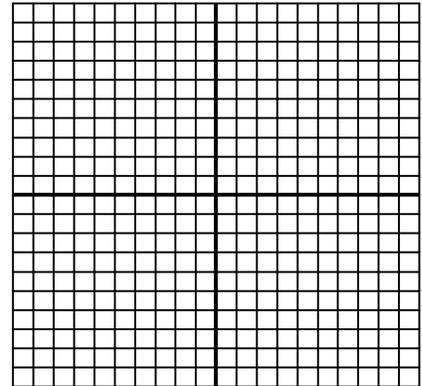
POI \_\_\_\_\_



26. Find the POI of  $y = 4x - 3$  and  $y = -x + 4$  by...

...graphing.

POI \_\_\_\_\_



...using Algebra

...using Algebra.

A 7-2

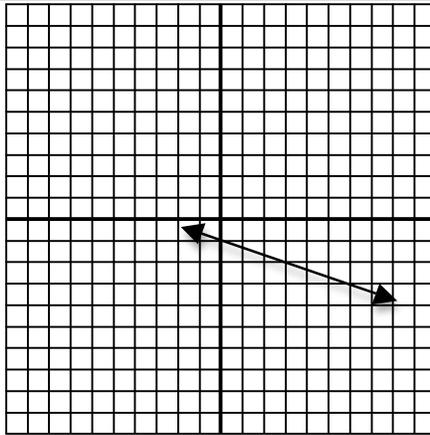
Given the graph, find the equation of the line.

Y-Intercept: \_\_\_\_\_

Slope: \_\_\_\_\_

Equation:

$y =$



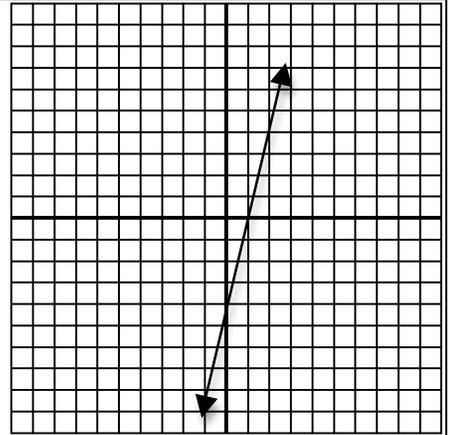
Given the graph, find the equation of the line.

Y-Intercept: \_\_\_\_\_

Slope: \_\_\_\_\_

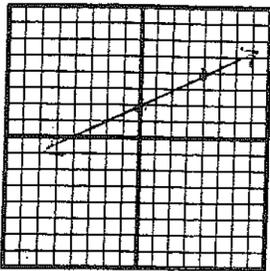
Equation:

$y =$

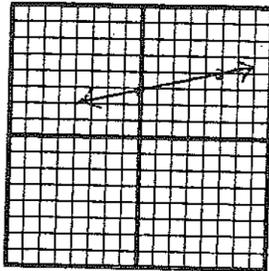


Name: \_\_\_\_\_ BDFM? \_\_\_\_\_ Why? \_\_\_\_\_

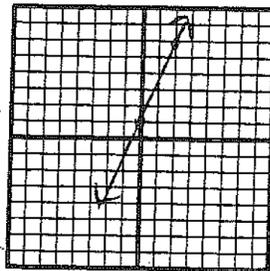
A 7-2



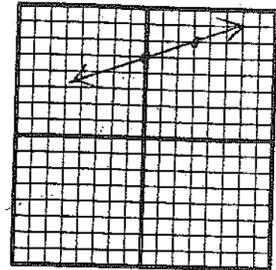
y - intercept:  
slope:  
 $y =$



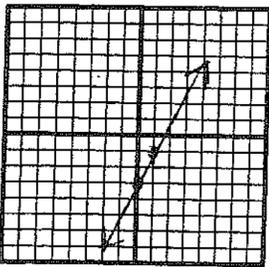
y - intercept:  
slope:  
 $y =$



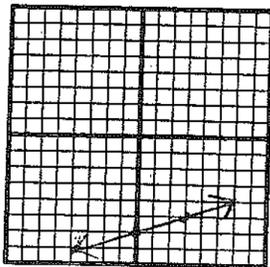
y - intercept:  
slope:  
 $y =$



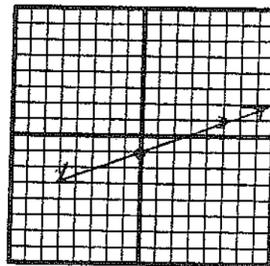
y - intercept:  
slope:  
 $y =$



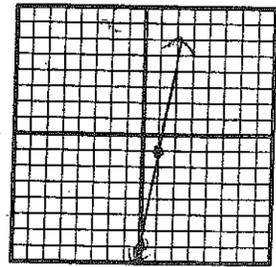
y - intercept:  
slope:  
 $y =$



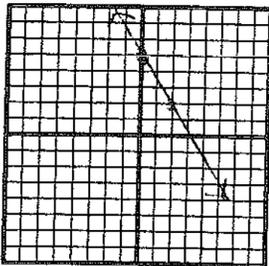
y - intercept:  
slope:  
 $y =$



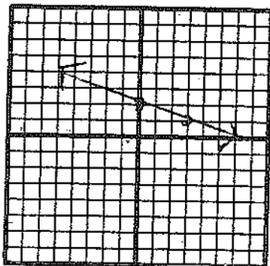
y - intercept:  
slope:  
 $y =$



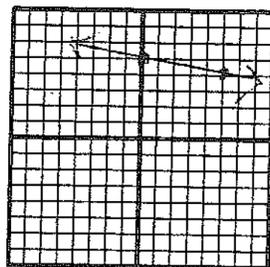
y - intercept:  
slope:  
 $y =$



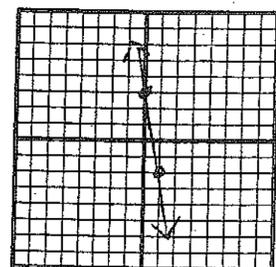
y - intercept:  
slope:



y - intercept:  
slope:



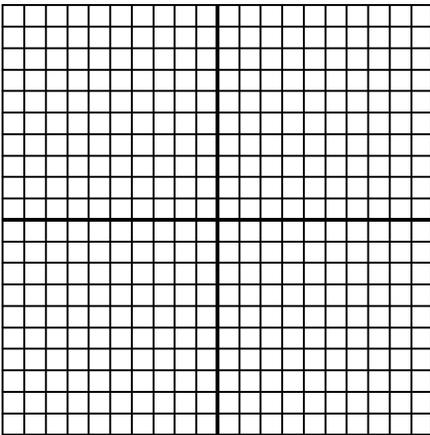
y - intercept:  
slope:



y - intercept:  
slope:

Graph.

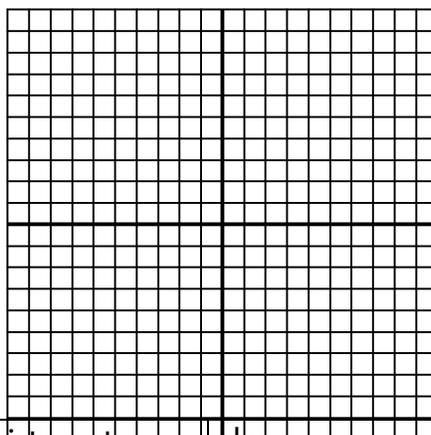
$$y = \frac{1}{3}x + 5$$



y-intercept

slope

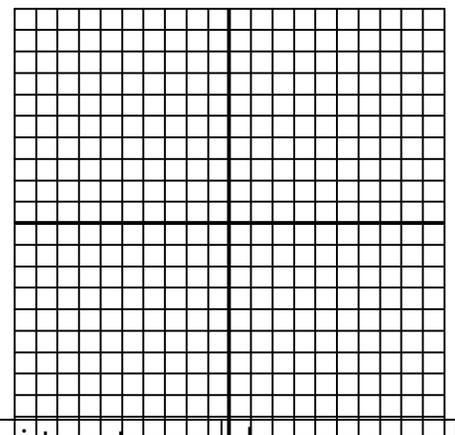
$$y = \frac{1}{2}x + 6$$



y-intercept

slope

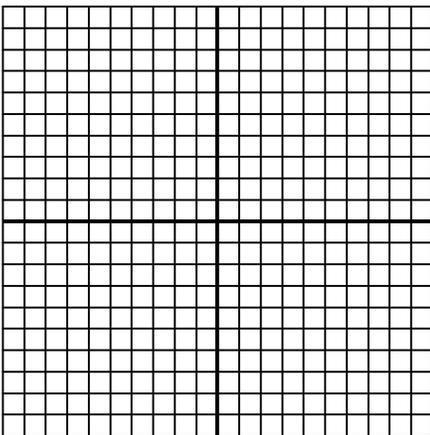
$$y = \frac{3}{4}x - 1$$



y-intercept

slope

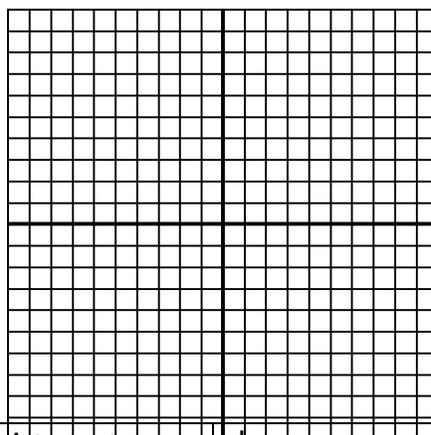
$$y = -\frac{2}{3}x + 3$$



y-intercept

slope

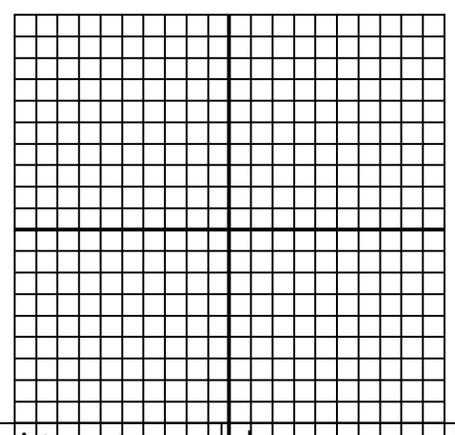
$$y = -\frac{3}{2}x + 4$$



y-intercept

slope

$$y = -\frac{3}{4}x + 1$$



y-intercept

slope

A 7-3

<p>Story</p> <p>There is a zebra that lives in Africa who is saving money. This zebra has 6\$ to start with. She earns 5\$ each week. Use the table to represent her earnings, write an equation and predict how much money the zebra will have in the future based on the next questions.</p>	<p>Table</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table>	x	y	0		1		2		3		4		5		6								<p>Equation</p> <p>How much does the zebra have after 30 weeks?</p>
x	y																							
0																								
1																								
2																								
3																								
4																								
5																								
6																								
<p>When does the zebra have 616\$?</p>	<p>The slope in this problem represents:</p> <p>The y-intercept in this problem represents:</p>																							

A 7-3 Name \_\_\_\_\_ BDFM? \_\_\_\_\_ Why? \_\_\_\_\_

<p>Story</p> <p>There is a zebra that lives in Africa who is saving money. This zebra has 10\$ to start with. She earns 2\$ each week. Use the table to represent her earnings, write an equation and predict how much money the zebra will have in the future based on the next questions.</p>	<p>Table</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>0</td><td></td></tr> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table>	x	y	0		1		2		3						<p>Equation</p> <p>How much does the zebra have after 40 days?</p>
x	y															
0																
1																
2																
3																
<p>When does the zebra have 856\$?</p>	<p>The slope in this problem represents:</p> <p>The y-intercept in this problem represents:</p>															

<p>Write the story problem!!!</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Table</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>0</td><td>20</td></tr> <tr><td>1</td><td>24</td></tr> <tr><td>2</td><td>28</td></tr> <tr><td>3</td><td>32</td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table>	x	y	0	20	1	24	2	28	3	32					<p>Equation</p> <p>How much does the zebra have after 45 years?</p>
x	y															
0	20															
1	24															
2	28															
3	32															
<p>When does the zebra have 2020\$?</p>	<p>The slope in this problem represents:</p> <p>The y-intercept in this problem represents:</p>															

Match the slope to the line:

\_\_\_\_\_  $m = 6$

\_\_\_\_\_  $m = 2$

\_\_\_\_\_  $m = 5$

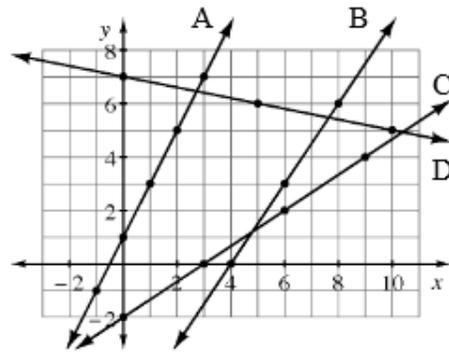
\_\_\_\_\_  $m = -5$

\_\_\_\_\_  $m = \frac{1}{5}$

\_\_\_\_\_  $m = -\frac{1}{5}$

\_\_\_\_\_  $m = \frac{2}{5}$

\_\_\_\_\_  $m = -\frac{2}{5}$



<p>Write the story problem!!!</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>Fill in the table!!!!</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> </tbody> </table>	x	y	0		1		2		3		<p>Equation</p> $y = 6x + 50$ <p>How much does the zebra have after 66 weeks?</p>
x	y											
0												
1												
2												
3												
<p>When does the zebra have 2672\$?</p>		<p>The slope in this problem represents:</p> <p>The y-intercept in this problem represents:</p>										

Find the slope between the points. SIMPLIFY THE SLOPE.

(7, 13) (-3, 23)

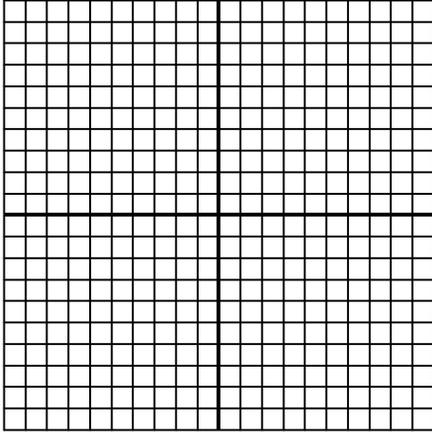
(18, 6) (27, 9)

(0, -6) (5, 4).

(6, 3) (10, 11).

Find the \_\_\_\_\_ of the line through (0, 4) with a slope of a 2...

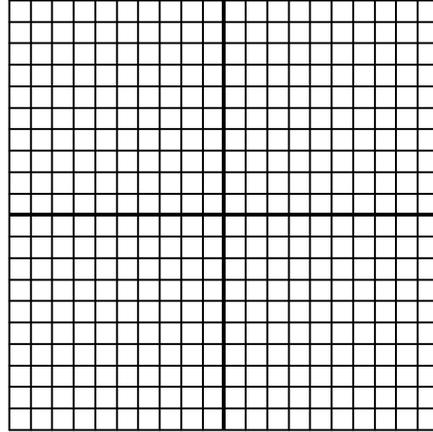
... using a graph.



Slope	Y-int
Equation	

Find the \_\_\_\_\_ of the line through (-4, -3) and (-1, 3).

... using a graph.



Slope	Y-int
Equation	

...using Algebra.

...using Algebra.

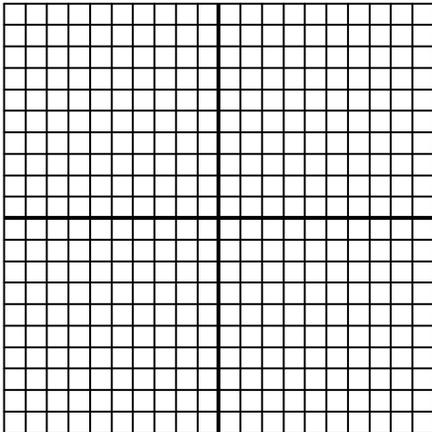
A 7-4 Name \_\_\_\_\_

BDFM? \_\_\_\_\_

Why? \_\_\_\_\_

Find the equation of the line through (0, 1) with a slope of a 3...

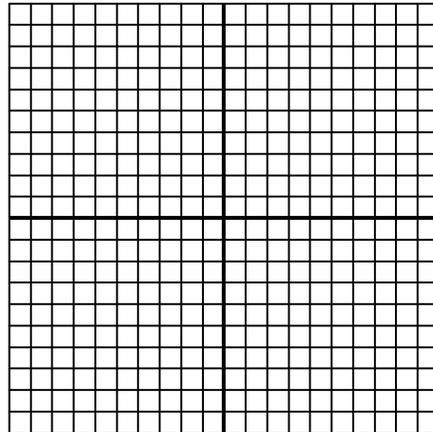
... using a graph.



Slope	Y-int
Equation	

Find the equation of the line through (-2, -8) and (1, 1)

... using a graph.



Slope	Y-int
Equation	

...using Algebra.

...using Algebra.

Find the equation of a line with a slope of 5 and through (0, -10) using Algebra.

Slope	Y-int
Equation	

Find the equation of a line with a slope of 4 and through (3, 18) using Algebra.

Slope	Y-int
Equation	

Find the equation of a line through (-1, 11) and (3, -7) using Algebra.

Slope	Y-int
Equation	

Find the equation of a line with a slope of -8 and through (5, 60) using Algebra.

Slope	Y-int
Equation	

Find the equation of a line with a slope of  $\frac{1}{2}$  and through (8, 64) using Algebra.

Slope	Y-int
Equation	

Find the equation of a line through (2, 7) and (0, 4) using Algebra.

Slope	Y-int
Equation	

Find the slope between (4, 56) and (8, 62).

Find the slope between (3, 26) and (9, 38).

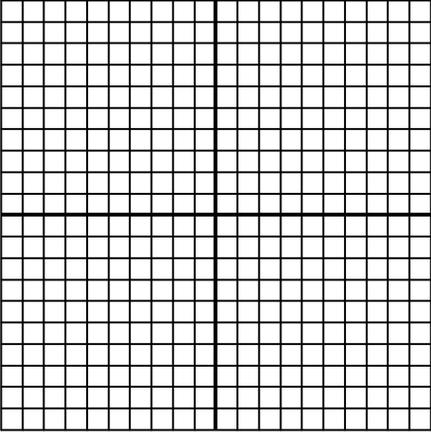
Find the slope between (2, 54) and (8, 36).

Find the slope between (-1, -6) and (3, -22).

A 7-5

Find the equation of the line through  $(-3, 1)$  and  $(6, 4)$

... using a graph.



Slope	Y-int
Equation	

...using Algebra.

Mr. Diaz gets into a taxicab to go to a concert. He tracks the amount of money he pays per mile:

a) Write an equation that represents the amount of money paid per mile.

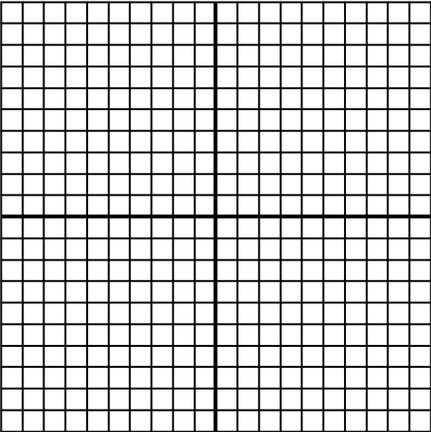
Distance, $d$ , in miles	Fare, $f$ , in dollars
3	8.25
5	12.75
11	26.25

b) What does the slope and y-intercept represent in this equation?

A 7-5

Find the equation of the line through  $(-3, 1)$  and  $(6, 4)$

... using a graph.



Slope	Y-int
Equation	

...using Algebra.

Mr. Diaz gets into a taxicab to go to a concert. He tracks the amount of money he pays per mile:

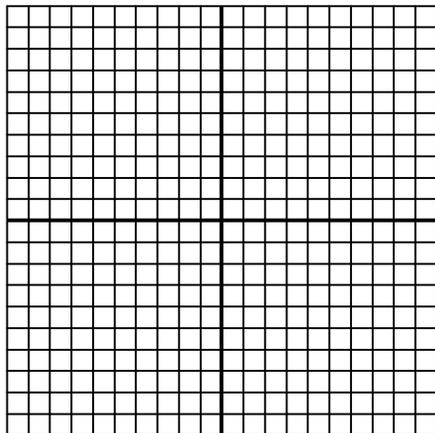
a) Write an equation that represents the amount of money paid per mile.

Distance, $d$ , in miles	Fare, $f$ , in dollars
3	8.25
5	12.75
11	26.25

b) What does the slope and y-intercept represent in this equation?

1) Find the equation of the line through  $(-3, -6)$   
and  $(3, -2)$

a) ... using a graph.

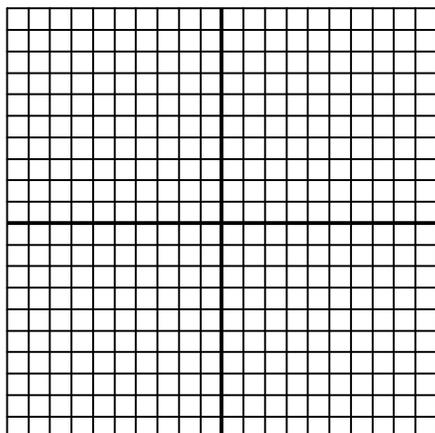


Slope	Y-int
Equation	

b) using Algebra....

2) Find the equation of the line through  $(-5, -5)$   
and  $(0, -4)$

a) Using a graph....

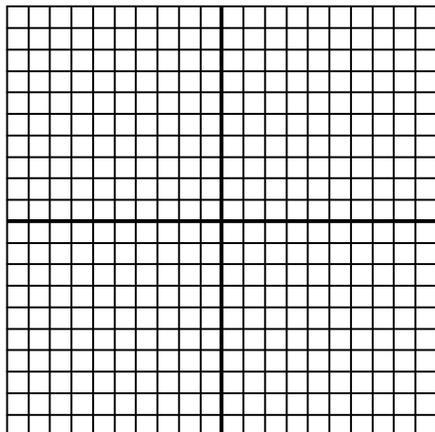


Slope	Y-int
Equation	

b) using Algebra....

3) Find the equation of the line through  $(-2, 9)$   
and  $(2, 3)$

a) Using a graph....



Slope	Y-int
Equation	

b) using Algebra....

4) Ms. Martinez opens a checking account at a local bank. She initially deposits \$3000 into the account. Each month, she removes \$250 to help pay for groceries. There are no other transactions that occur on the account.

a) Write an equation representing this situation

b) How many months until she has \$750?

b) Create a graph showing the amount of money in the account over time. Label the axis.

c) How much money will she have after 11 months?

d) What does the y-intercept represent?

e) What does the x-intercept represent?

5) Sam wants to take his MP3 player and his Nintendo DS on a car trip. An hour before they plan to leave, he realized that he forgot to charge the batteries last night. At that point, he plugged in both devices so they can charge as long as possible before they leave.

Sam knows that his MP3 player has 40% of its battery life left and that the battery charges by an additional 12 percentage points every 15 minutes.

His Nintendo DS is new, so Sam doesn't know how fast it is charging but he recorded the battery charge for the first 30 minutes after he plugged it in.

Time Charging (minutes)	Nintendo DS battery charge (%)
0	20
10	32
20	44
30	56

a) Write an equation representing how much battery life the Nintendo DS has when charging

b) If they leave in 1 hour, how much battery charge will the Nintendo DS have?

c) Write an equation representing how much battery life the MP3 player has when charging.

d) How long before the MP3 player and the Nintendo DS are both fully charged?





4. Find equation of the line...

<p>...with slope 2 and through (0, -6).</p> <table border="1" data-bbox="151 163 436 348"> <tr> <td>Slope</td> <td>Y-int</td> </tr> <tr> <td colspan="2">Equation</td> </tr> </table>	Slope	Y-int	Equation		<p>...with slope 3 and through (10, 44).</p> <table border="1" data-bbox="524 163 810 348"> <tr> <td>Slope</td> <td>Y-int</td> </tr> <tr> <td colspan="2">Equation</td> </tr> </table>	Slope	Y-int	Equation		<p>...through (7, 3) and (13, 15).</p> <table border="1" data-bbox="899 163 1185 348"> <tr> <td>Slope</td> <td>Y-int</td> </tr> <tr> <td colspan="2">Equation</td> </tr> </table>	Slope	Y-int	Equation		<p>...through (4, 3) and (10, 6).</p> <table border="1" data-bbox="1274 163 1560 348"> <tr> <td>Slope</td> <td>Y-int</td> </tr> <tr> <td colspan="2">Equation</td> </tr> </table>	Slope	Y-int	Equation	
Slope	Y-int																		
Equation																			
Slope	Y-int																		
Equation																			
Slope	Y-int																		
Equation																			
Slope	Y-int																		
Equation																			

5. Haile and Kenny start charging their phones at the same time.

<p style="text-align: center;">Hailes's iPhone 5s</p> <p style="text-align: center;">Starts at 78% and goes up 3% every minute</p>	<p style="text-align: center;">Kenny's iPhone 6s</p> <table border="1" data-bbox="852 989 1211 1243"> <thead> <tr> <th>Minutes after starting charge</th> <th>Phone percent (%) charged</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>21</td> </tr> <tr> <td>6</td> <td>51</td> </tr> <tr> <td>9</td> <td>66</td> </tr> <tr> <td>11</td> <td>76</td> </tr> </tbody> </table>	Minutes after starting charge	Phone percent (%) charged	0	21	6	51	9	66	11	76
Minutes after starting charge	Phone percent (%) charged										
0	21										
6	51										
9	66										
11	76										

<p>a) Find equations for Haile and Kenny's phone charge (y) after x minutes.</p>	<p>b) Whose phone is charging faster? How do you know?</p>	<p>c) Whose phone had a higher charge when they started charging? How do you know?</p>	<p>d) Whose phone is fully charged first? How do you know?</p>
--	--	--	--

6. Find the point of intersection of  $y = 2x - 1$   
 $3x + 4y = 29$