



Algebra II

Monday  
October 6, 2014



**3 OUT OF 2  
PEOPLE  
— HAVE —  
TROUBLE  
— WITH —  
FRACTIONS**





## Algebra II Warm Up

Monday  
October 6, 2014

What is the equation  
of the line using the  
table provided?

x	y
-10	8
-8	6
-4	2
-2	0
0	-2
4	-6
6	-8



End of Course Algebra 1

p. 121

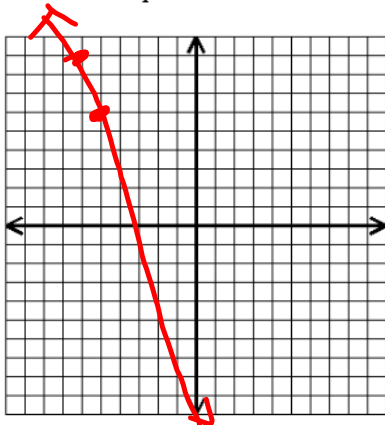
Reporting Category 3

<p><u>Linear Functions:</u> The student will demonstrate an understanding of linear functions</p>	<p><b>Name:</b> _____</p> <p><b>Date:</b> _____</p> <p><b>Period:</b> _____</p> <p><b>Topic:</b> A.6D – Graph and write equations of lines given characteristics such as two points, a point and slope, or a slope and y-intercept.</p>
<p>Academic Language</p>	<p>Notes:</p>
<p>Slope</p>	$m = \frac{\text{RISE}}{\text{RUN}} = \frac{y_2 - y_1}{x_2 - x_1}$
<p>y-intercept</p>	<p>b</p>
<p>Parallel</p>	<p>SAME SLOPE <math>-\frac{2}{1}</math> <math>\frac{1}{2}</math></p>
<p>Perpendicular</p>	<p>SLOPES ARE INVERSE RECIPROCAL</p>
<p><u>Equation</u></p>	
<p>Point Slope</p>	$y - y_1 = m(x - x_1)$
<p><u>Linear Function</u></p>	$y = mx + b$ <p>m = slope</p> <p>b = y-INT</p>

A.6D	Graph and write equations of lines given characteristics such as two points, a point and slope, or a slope and y intercept.
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Part I

1. What is the equation of the line that contains the points (-5, 6) and (-6, 9)?



X	Y
-5	6
-6	9

$x_1, y_1$     $x_2, y_2$   
 Equation:  $y = -3x - 9$   
 $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{9 - 6}{-6 - (-5)} = \frac{3}{-1} = -3$   
 $y - y_1 = m(x - x_1)$   
 $y - 6 = -3(x - (-5))$   
 $y - 6 = -3x + 15$   
 $y = -3x + 15 + 6$   
 $y = -3x + 21$  (circled)

2. What is the equation of the line that has a y-intercept of 2 and a slope of  $\frac{3}{4}$ ?

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

$y = mx + b$   
 $m = \frac{3}{4}$     $b = 2$   
 $y = \frac{3}{4}x + 2$

3. Write an equation that describes a line that passes through the point (6, -3) and is perpendicular to the line represented by the equation  $2x - 7y = 14$

Equation:  $y = -\frac{7}{2}x + 18$

$2x - 7y = 14$   
 $-2x$     $-2x$   


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 $-7y = -2x + 14$   
 $-\frac{7y}{-7} = \frac{-2x}{-7} + \frac{14}{-7}$   
 $y = \frac{2}{7}x - 2$   

 $m = \frac{2}{7}$   
 $\perp m = -\frac{7}{2}$

4. Write an equation that describes a line that passes through the point (-2, 1) and is parallel to the line represented by the equation  $x - 3y = 8$

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



## Algebra II

Tuesday  
October 7, 2014

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“Algebra class will be important to you later in life because there’s going to be a test six weeks from now.”






## Algebra II Warm Up

Tuesday  
October 7, 2014

What is the equation of the line that contains the points (4, 5) and (-4, -6)?

$$\begin{array}{c|c} x & y \\ \hline 4 & 5 \\ -4 & -6 \end{array}$$

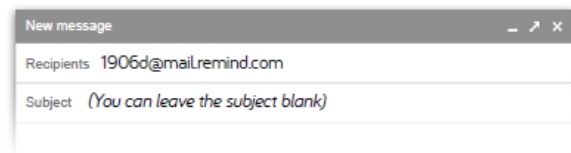


How to sign up for Mr. Diaz Math's Math  remind  
2014-2015 messages:

To receive messages via text, text @1906d to (239) 449-6642. You can opt-out of messages at anytime by replying, 'unsubscribe @1906d'.



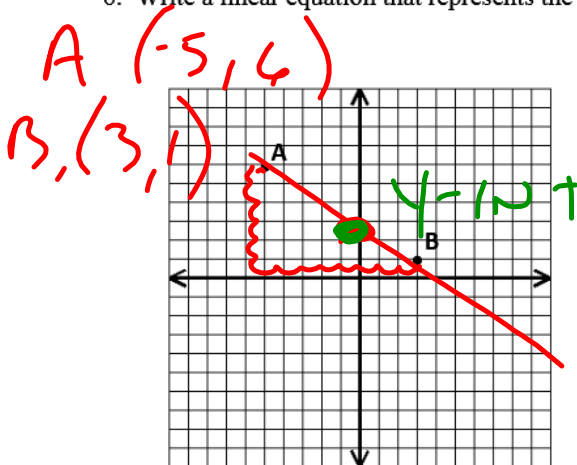
Or to receive messages via email, send an email to [1906d@mail.remind.com](mailto:1906d@mail.remind.com). To unsubscribe, reply with 'unsubscribe' in the subject line.



5. What is the equation of the line that contains the points (-3, 7) and (6, -5)?

Equation:  $y = -1.3x + 3$

6. Write a linear equation that represents the line that passes through points A and B.



5/8

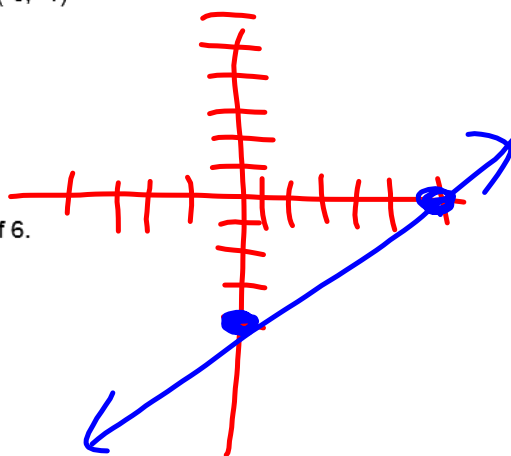
Equation:  $y = -\frac{1}{8}x + 2.5$   
 $y = 0.625x + 2.5$

7. Write an equation that has a slope of  $-\frac{1}{3}$  and passes through (-6, -1)

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

8. Write an equation that has a y-intercept of -4 and x-intercept of 6.

Equation:  $y = \frac{1}{6}x - 4$



9. Write an equation that passes through the point (-4, 6) and has a y-intercept of (0, 2).

Equation:  $y = -x + 2$



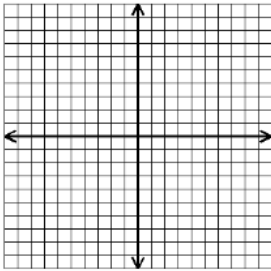
## Quiz for Friday

## End of Course Algebra 1 p. 124

## Reporting Category 3

## Part II

1. Which linear function includes the points (2, -7) and (-1, -10)?



- A.  $y = x - 9$   
 B.  $y = -x - 11$   
 C.  $y = 3x + 13$   
 D.  $y = -3x + 5$
2. Which equation describes a line that passes through the point (-1, 5) and has a slope of -3?
- F.  $y = -3x + 14$   
 G.  $y = -3x + 8$   
 H.  $y = -3x + 2$   
 J.  $y = -3x - 2$

3. Which linear function includes the points (3, 3) and (-6, 9)?

- A.  $y = -2x - 3$   
 B.  $y = -\frac{3}{2}x + 4\frac{1}{2}$   
 C.  $y = -\frac{2}{3}x + 5$   
 D.  $y = -\frac{2}{3}x + 3$

4. Which equation describes the line that passes through the point (1, 4) and is parallel to the line represented by the equation  $-5x + y = 8$ ?

- F.  $y = 5x - 1$   
 G.  $y = -5x + 4$   
 H.  $y = \frac{1}{5}x + 3\frac{4}{5}$   
 J.  $y = -\frac{1}{5}x + 4\frac{1}{5}$

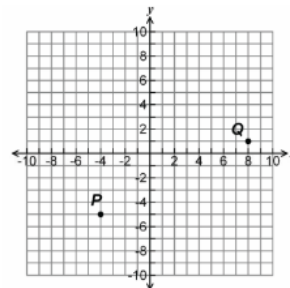
5. Which of the following describes the line containing points (-6, -10) and (6, -2)?

- A.  $y = \frac{2}{3}x + 6$   
 B.  $y = \frac{3}{2}x + 1$

- C.  $y = \frac{2}{3}x - 6$

- D.  $y = \frac{3}{2}x - 1$

6. Which linear equation represents the line passing through points P and Q?



- F.  $y = 2x + 3$   
 G.  $y = 2x - 3$   
 H.  $y = 0.5x + 3$   
 J.  $y = 0.5x - 3$

## Quiz for Friday

End of Course Algebra 1

p. 125

Reporting Category 3

7. Which equation describes a line that has a y-intercept of 3 and a slope of  $\frac{4}{3}$ ?

A.  $y = 3x + \frac{4}{3}$

B.  $y = 3x - \frac{4}{3}$

C.  $y = \frac{4}{3}x + 3$

D.  $y = \frac{4}{3}x - 3$

8. Determine the equation of the line with slope of -2.5 that passes through the point at (3.5, -1.5)?

F.  $4y + 10x = 29$

G.  $x + y = 2$

H.  $y = 10x - 4y = 29$

J.  $6x - 8y = 33$

9. What is the equation of the line that passes through the points at (-6, 2) and (1, 4)?

A.  $2y - 7x = 1$

B.  $3x - 2y = -22$

C.  $4x + y = 26$

D.  $7y - 2x = 26$

10. Which equation describes the line that passes through the point at (-3, 1) and is perpendicular to the line represented by the equation  $y + 4x = -5$ ?

F.  $y = -4x - 11$

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

H.  $y = \frac{1}{4}x + \frac{7}{4}$

J.  $y = 4x + 13$

11. Which function represents the line that contains the point at  $(5, -\frac{1}{2})$  and has a slope of  $\frac{1}{2}$ ?

A.  $f(x) = \frac{1}{2}x - \frac{5}{2}$

B.  $f(x) = \frac{1}{2}x - 3$

C.  $f(x) = \frac{1}{2}x - 2$

D.  $f(x) = \frac{1}{2}x + \frac{5}{2}$



Algebra II

Wednesday  
October 8, 2014

**THAT AWKWARD  
MOMENT WHEN YOU  
FINISH A MATH PROBLEM  
AND YOUR ANSWER  
ISN'T EVEN ONE OF THE  
CHOICES.**



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Algebra II  
Warm Up

Wednesday  
October 8, 2014

Find the  
x-intercept and the  
y-intercept for  
 $y = -5x + 2$ .





Algebra II

Thursday  
October 9, 2014

Why learn algebra?  
Finding X is only  
useful if you're a  
pirate!

Yarrrr!





Algebra II  
Warm Up

Friday  
October 10, 2014

1. Solve the following system of equations:

$$x - y = 30$$

$$x = 2y + 3$$

2. What is the equation of the line that contains the points (4, 5) and (-4, -6)?



<p><u>Linear Functions:</u> The student will demonstrate an understanding of linear functions</p>	<p>Name: _____ Date: _____ Period: _____ Topic: <u>A.6E – Determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations.</u></p>
<p>Academic Language</p>	<p>Notes:</p>
<p>Linear Function</p>	
<p>x-intercept</p>	<p><math>(2, 0)</math> X-AXIS</p>
<p>y-intercept</p>	<p><math>(0, 4)</math> Y-AXIS</p>
<p>Graph</p>	
<p>Table</p>	
<p>Function</p>	
<p>Zeros</p>	<p>X-INT SOLUTION ROOT</p>
<p>Coordinate Pair</p>	

End of Course Algebra 1

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Reporting Category 3

A.6E	Determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations.
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**Part I**

1. What are the x and y-intercepts of the function  $3x - 6y = 12$ ?

x-intercept: (4, 0)      y-intercept: (0, -2)

2. What are the x and y-intercepts of the function  $\frac{3}{2}x - y = 9$ ?

x-intercept: (6, 0)      y-intercept: (0, -9)

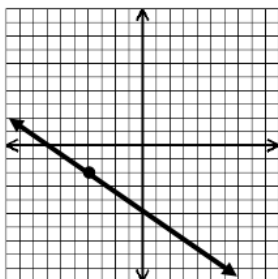
3. What are the x and y-intercepts of the function  $\frac{1}{2}(x + 2y - 6) = 3$ ?

x-intercept: (12, 0)      y-intercept: (0, 6)

4. What are the x and y-intercepts of the function  $\frac{13}{7}(2x + 11y) = -26$ ?

x-intercept: (-7, 0)      y-intercept: (0, -14/11)

5. What are the x- and y- intercepts of the function graphed below?



x-intercept: (-7, 0)

y-intercept: (0, 5)



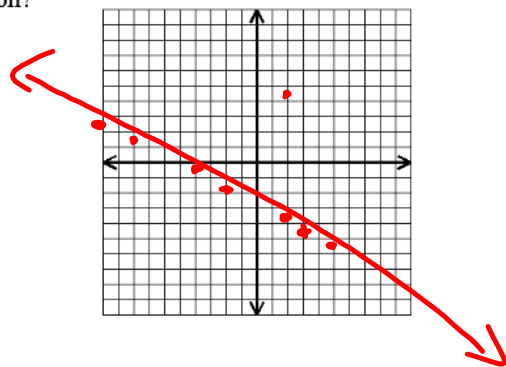
6. What are the x- and y-intercepts of the function  $6x + 3y = -12$ .

x-intercept: -2  
 coordinate pair:  $(-2, 0)$

y-intercept: -4  
 coordinate pair:  $(0, -4)$

7. The table below shows ordered pairs of a linear function. What are the x- and y-intercepts for the graph of this linear function?

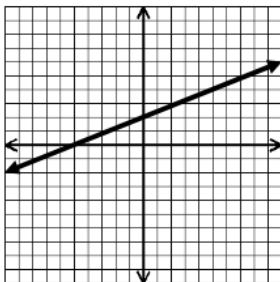
x	y
-10	2
-8	1
-4	-1
-2	-2
2	4
4	-5
6	-6



x-intercept:  $(-6, 0)$

y-intercept:  $(0, 3)$

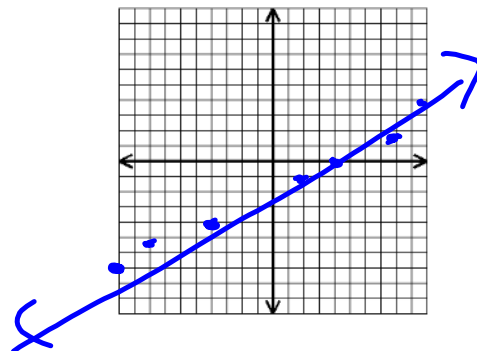
8. What are the zeros of the function graphed below?



$x = -5$

9. The table below shows ordered pairs of a linear function. What are the zeros for the graph of this linear function?

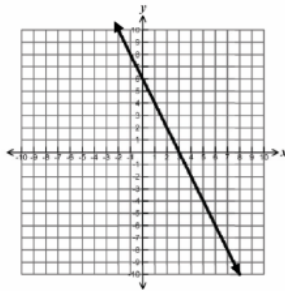
x	y
-10	-8
-8	-7
-4	-5
2	-2
4	-1
8	1
10	2



$x = 6$

## Part II

1. What are the x- and y-intercepts of the function graphed below?



- A. (0, 6) and (0, 3)  
 B. (0, 6) and (3, 0)  
 C. (6, 0) and (3, 0)  
 D. (6, 0) and (0, 3)

2. Which of the following ordered pairs is an x-intercept or y-intercept of the function  $x - 2y = 12$ ?

- E. (12, 0)  
 G. (6, 0)  
 H. (0, 12)  
 J. (0, 6)

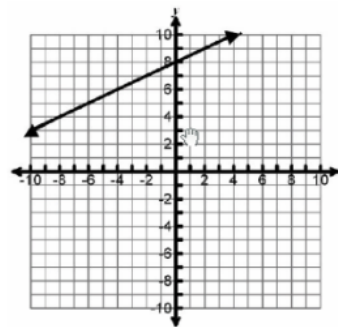
3. Which linear function has an x-intercept of 3 and a y-intercept of 6?

- A.  $y = -2x + 6$   
 B.  $y = -2x + 3$   
 C.  $y = 2x + 6$   
 D.  $y = 2x + 3$

4. What is the y-intercept of the linear function  $\frac{2}{3}y - 4x = 6$ ?

- F. (0, -9)  
 G. (0, 9)  
 H.  $(-\frac{3}{2}, 0)$   
 J.  $(\frac{3}{2}, 0)$

5. What is the x-intercept of the linear function shown in the graph below?



- A. (0, 8)  
 B. (-12, 0)  
 C. (-8, 0)  
 D. (-16, 0)

6. What is the y-intercept of the line that contains the points described in the table below?

x	y
-4	-10
-1	-1
2	8

- F. -3  
G. 3  
H. 1  
I. 2

7. Which coordinates points represent the x- and y- intercepts of the graph shown below?

- A. (0, 2) and (3, 0)  
B. (3, 0) and (2, 0)  
C. (3, 0) and (0, 2)  
D. (2, 0) and (0, 3)

8. Which coordinate points of the x-intercept and y-intercepts represent the linear function  $5x + 2y = 15$ ?

- F. (0, 7.5) and (0, 3)  
G. (7.5, 0) and (0, 3)  
H. (3, 0) and (7.5, 0)  
I. (3, 0) and (0, 7.5)

9. What are the zeros of the linear function according to the data in the table below?

x	y
-2	-10
4	5
6	10

- A. (-5, 0) and (2, 0)  
B. (-5, 0) and (0, 2)  
C. (2, 0) and (0, -5)  
D. (2, 0) and (-5, 0)

10. What are the coordinates of the y-intercept of the line that passes through the points at (-4, 1) and (2, -2)?

- F. (0, -2)  
G. (0, -1)  
H. (-2, 0)  
J. (-4, 0)

11. What are the coordinates of the x-intercept of the line that passes through the points at (2, -3) and (-1, 3)?

- A. (2, 0)  
B.  $(\frac{1}{2}, 0)$   
C. (0, 1)  
D. (0, -2)



Algebra II  
W.A.C

Thursday  
October 9, 2014



**A DAY**

What is commitment?

**B DAY**

If you could change one thing about your math class, what would it be? Why do you think your class would be better if the change were made?

