Date: _____/Algebra I
Rev 2012-13

4.5: Graph Linear Equations
"I WILL
…Graph Linear Equations in a Coordinate Plane."

I. Definitions

A. _____ is a non-vertical line between two points

B. _____ is the vertical movement

C. _____ is the horizontal movement

II. Equations

A. Slope: $m =$ ————

Rewrite it as: $m =$ ————

B. Slope-Intercept form is _____ where

1. _____ is the slope
2. _____ is the *y*-intercept

III. Steps

A. Establish the slope of the equation

B. Identify any points and or *y*–intercept and plot the points

C. Apply the slope

D. Continue the process until at least three points are given

E. Draw your ARROWED line

REMEMBER: THINK TO DRAW IT OUT!

IV. Model Problems

Ex 1: Identify the slope and the *y*-intercept of the line with the given equation, $y = 3x - 4$.	Ex 2: Identify the slope and the *y*-intercept of the line with the given equation, $y = -5x + 3$.	Your Turn: Identify the slope and the *y*-intercept of the line with the given equation, $y = -1/2x - 7/5$.

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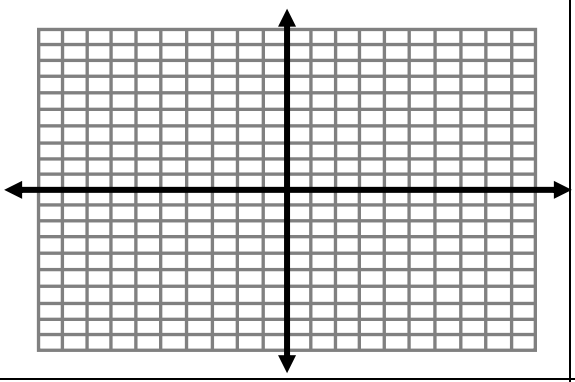
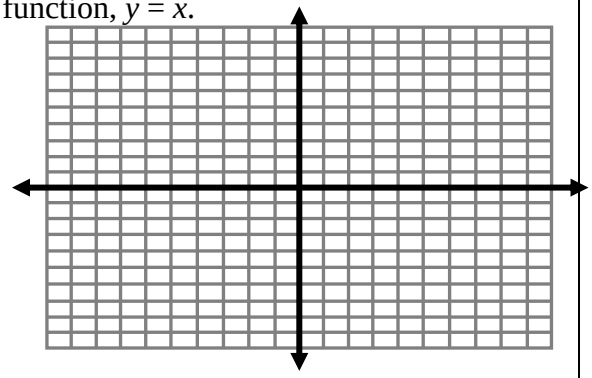
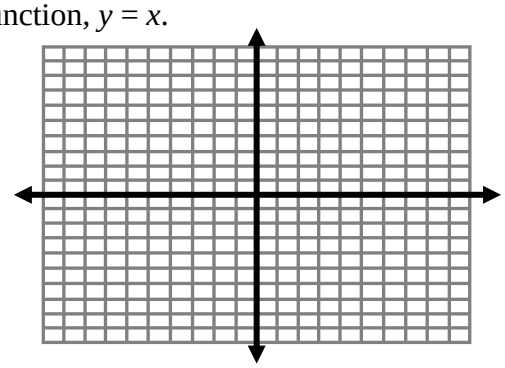
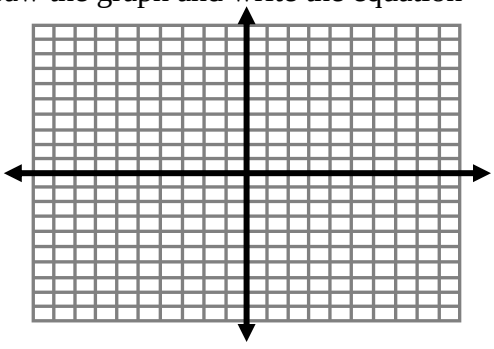
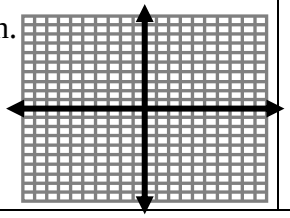
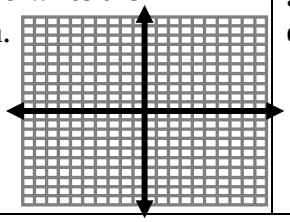
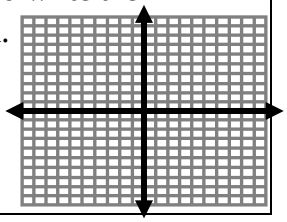
Ex 3: Identify the slope and the *y*-intercept of the line with the given equation, $3x + y = 2$.	Ex 4: Identify the slope and the *y*-intercept of the line with the given equation, $3x – 3y = 12$
Ex 5: Identify the slope and the *y*-intercept of the line with the given equation, $x + 4y = 6$	Your Turn: Identify the slope and the *y*-intercept of the line with the given equation, $3x + y = 2$
Ex 6: If given point (0, 2) and the slope of 3, draw the graph 	Ex 7: Graph the equation, $y = –2x + 4$. Then compare the graph to the parent function, $y = x$. 
Ex 8: Graph the equation, $y = –3 + 1/3x$. Then compare the graph to the parent function, $y = x$. 	Your Turn: If the graph has a rate of change of 3 and passes through the origin, draw the graph and write the equation 

Ex 9: If the graph has a slope of zero and passes through (–1, –5), draw the graph and write the equation. 	Ex 10: If the graph has an undefined slope and passes through (–1, –5), draw the graph and write the equation. 	Your Turn: If the graph has a zero slope and passes through (2, –3), draw the graph and write the equation. 

Assignment: Worksheet