SOL Review: Slope Identification

What is slope?

Definition

Describes the steepness and direction of a line

Finding slope given two points on the line: (x_1, y_1) and (x_2, y_2)

Method 1:

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

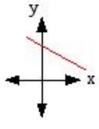
$$m = \frac{\Delta y}{\Delta x}$$

where \triangle means "change in"-subtraction.

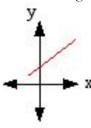
Finding the slope of a line given an equation:

Solve the equation for y (slope-intercept form). The coefficient of x is the slope of the line.

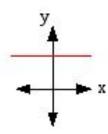
Slope can be one of four different things:



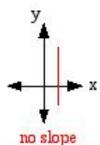
negative



positive



zero (m = 0)



(m undefined)

HOY-VUX

Horizontal Lines (HOY)
0 slope
11.11

Horizontal Lines (HOY)	
0 slope	
v — ##	

Vertical Lines (VUX) Undefined slope

$$x = ##$$

Parallel and Perpendicular Lines

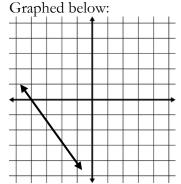
Perpendicular lines have negative reciprocal slopes.

SOL Review: Slope Identification

Directions: Find the slope given the information.

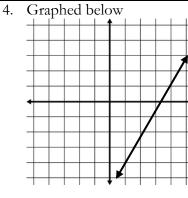
1. Contains the points:

(-2,5);(3,-4)



3. Has the equation:

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



Parallel to the line that has the equation:

-2x + 4y = 24

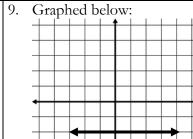
6. Contains the points (5,5);(-3,5)

7. Has the equation:

x = -5

8. Perpendicular to the line that contains the points:

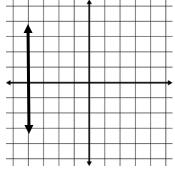
(-2,3);(-4,-1)



10. Contains the points:

(-3,-5);(-3,-2)

11. Graphed below:



12. Has the equation:

$$y = -2$$