Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Points: \_\_\_\_\_\_

1. Graph by the  method, where

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 y-intercept

a. Graph  b. Solve the equation for y and graph: 

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2. Special Lines: The graph of  is a horizontal line through 

The graph of  is a vertical line through 

a. Graph  b. Graph 

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**Definition of Slope**: The slope, m, of the line between two points and is given by

**Slope** = m =

3. The Slope of a Line

Negative Slope Positive Slope Zero Slope Slope Undefined

**4. The Equation of a Line**

**The Standard Form for the Equation of a Line**: If a, b, and c are integers, then the equation of a line is in standard form when it has the form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . An example is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

**Slope-Intercept Form of the Equation of a Line**: The equation of any line with slope m and y-intercept b is given by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . An example is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

**Point-Slope Form of the Equation of a Line:** The equation of the line through with slope m is given by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

1. Find the equation of the line with slope and y-intercept.
2. Give the slope and y-intercept for the line .
3. Find the equation of the line that passes through the points and .

Parallel Lines: Non vertical parallel lines have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Perpendicular Lines: The slopes of perpendicular lines are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

5. Write an equation of a line passing through the point and

a. parallel to  b. perpendicular to 

6. a. Write an equation of a line passing through the point  and **perpendicular** to 

Graph both equations.

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b. Write an equation of a line passing through the point  and **parallel** to 

Graph both equations.

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c. Write an equation of a line passing through the point  and **perpendicular** to 

Graph both equations.

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