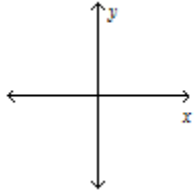# Review: Linear Equations, Graphs, and Application

Name: _____
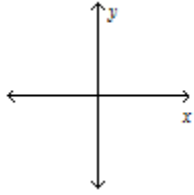
Slope

1) Draw a line with…
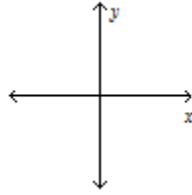
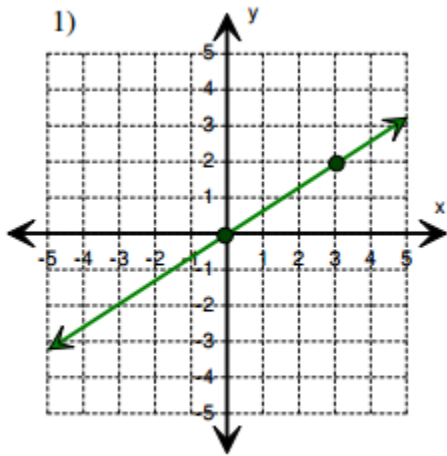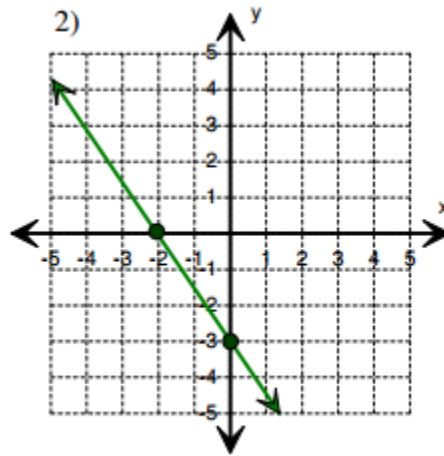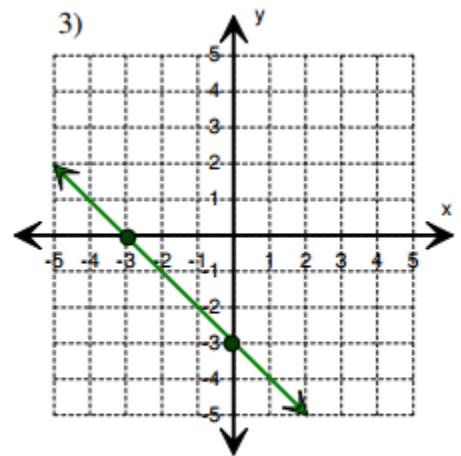| Positive Slope	Negative Slope	Zero Slope	Undefined Slope
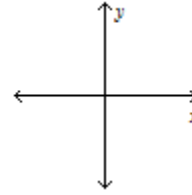
2) Find the slope of each of the following lines by making a stair-step.

1)

Slope = _____

2)

Slope = _____

3)

Slope = _____

3) Find the slope given two coordinates. Show your work.

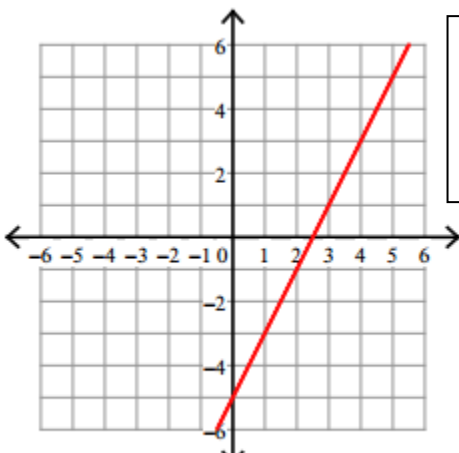1) $(4, -1)$ and $(-2, 3)$ 2) $(3, 5)$ and $(6, 2)$ 3) $(8, 7)$ and $(4, 7)$
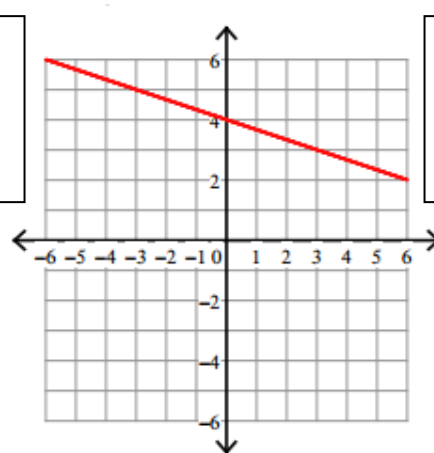
Slope = _____   Slope = _____   Slope = _____

Slope Intercept Form
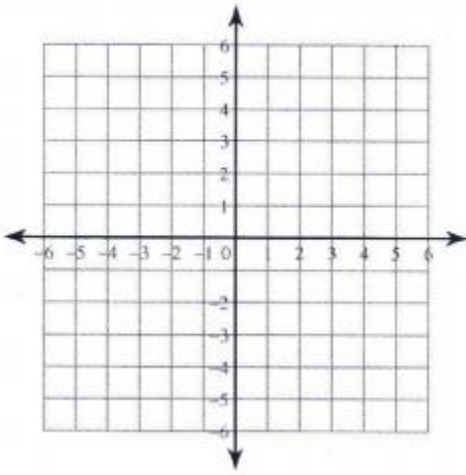
4) Write the equation of the line in slope intercept form.

Equation:

_____

Equation:

_____

5) Graph the equation using the slope and y-intercept.
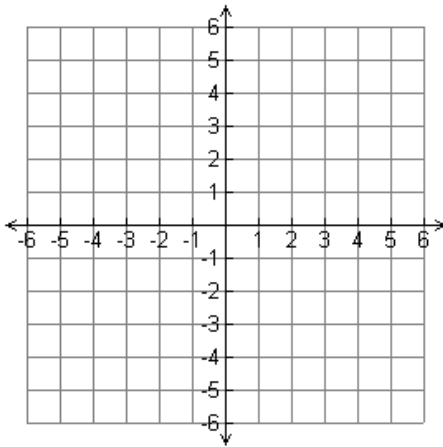
$y = \dfrac{5}{2}x - 3$

$y = -4x + 5$
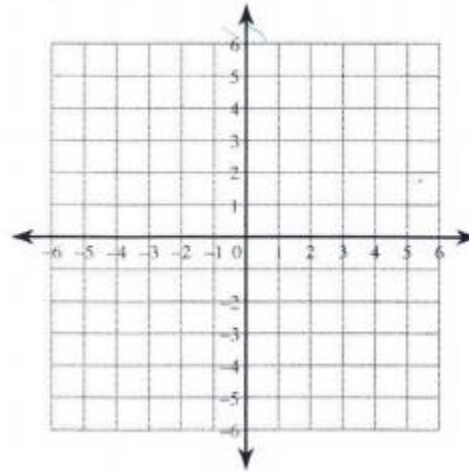
Standard Form

6) Graph each equation using the x and y intercepts.
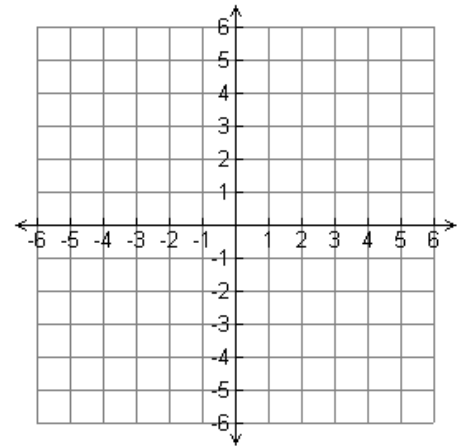
$x + 2y = 6$

x-int: _____
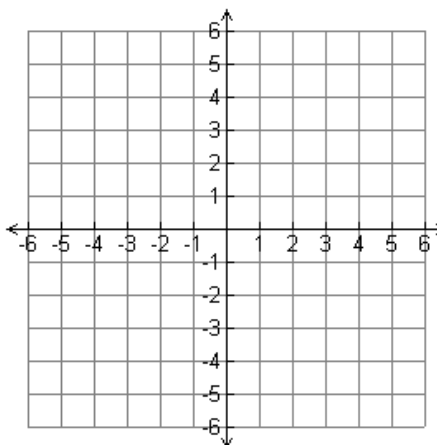
y-int: _____

$4x - 2y = 12$

x-int: _____

y-int: _____

Point Slope Form

7) Graph using the point and slope.
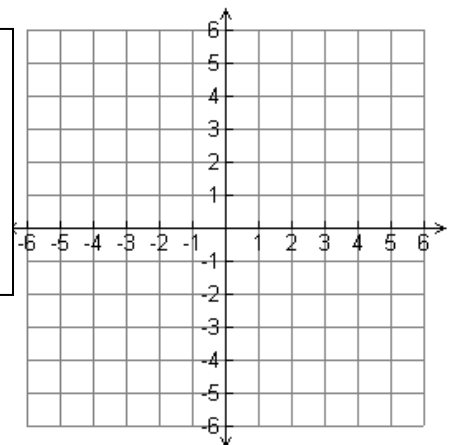
$y - 2 = -3(x - 5)$

point: _____

slope: _____

$y + 5 = \dfrac{2}{3}(x + 4)$

point: _____

slope: _____

8) Write an equation in the requested form of the line given information about the graph.

a) slope = 3; y-intercept = −4

slope-intercept form: _____

standard form: _____

b) Through the point $(4, -5)$ with a slope of $\frac{1}{2}$.

point-slope form: _____

slope-intercept form: _____

standard form: _____

c) Through the points $(-2, 8)$ and $(-3, -4)$.

point-slope form: _____

slope-intercept form: _____

standard form: _____

d) Through (-3, -8) and <u>perpendicular</u> to $y = -4x + 2$

point-slope form: _____

slope-intercept form: _____

standard form: _____

e) Through (5, -2) and <u>parallel</u> to $y = -\frac{1}{2}x + 5$

point-slope form: _____

slope-intercept form: _____

standard form: _____

f) Through (-1, 3) and <u>parallel</u> to $3y = x - 21$

point-slope form: _____

slope-intercept form: _____

standard form: _____

g) Through (4, -8) and <u>perpendicular</u> to $2y - 4 = -16x$

point-slope form: _____

slope-intercept form: _____

standard form: _____

h) A vertical line through $(1, -5)$

(any form): _____

i) A horizontal line through $(-2, 8)$

(any form): _____