$y=4x-9$

$y=4x-6$

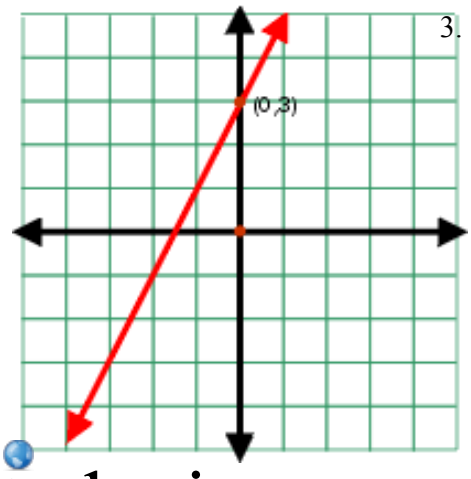
Which lines are parallel? perpendicular?

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

$y=6x-6$

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

$$y = mx + b$$



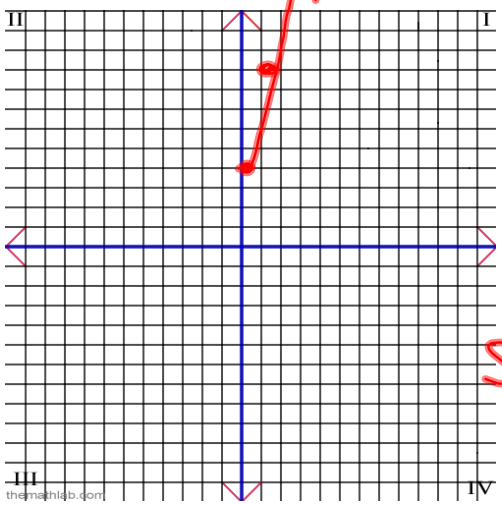
The equation is said to be in

Slope-Intercept Form

- m = Slope
- b = y-intercept

Find the Slope and Y-intercept

1) $y = 5x + 4$



Start

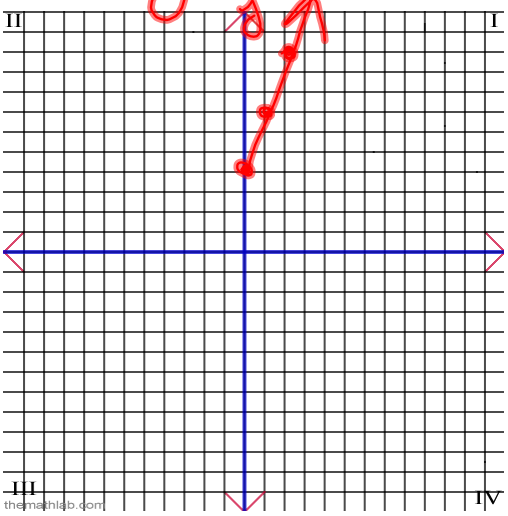
Slope(m): 5/1

y-intercept(b): 4

2) Graph the following equation.

$$\frac{2y}{2} = \frac{6x}{2} + \frac{8}{2}$$

$y = 3x + 4$



Slope(m): 3/1 rise / run

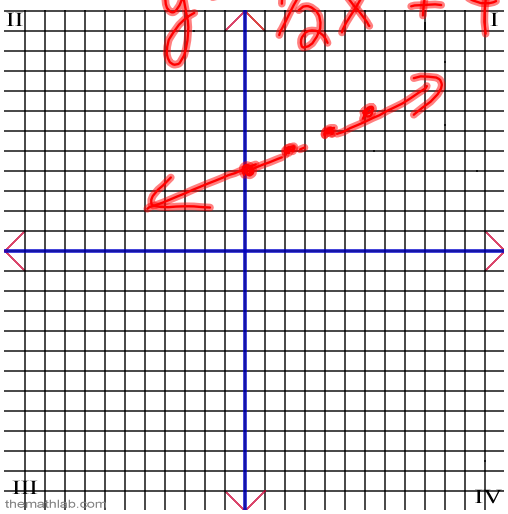
y-intercept(b): 4

start

3) a) Graph the following equation.

$$y + 3 = 1/2x + 7$$

$y = \frac{1}{2}x + 4$



b) State the parallel slope of the equation.

$\frac{1}{2}$

Slope(m): $\frac{1}{2}$

y-intercept(b): 4

4) State the perpendicular slope of the equation

$$2(y - 4) = 4x - 8$$

$2y - 8 = 4x - 8 + 8$

$\frac{2y}{2} = \frac{4x + 0}{2}$

$y = 2x + 0$

$m = 2$
$b = 0$

$-\frac{1}{2}$

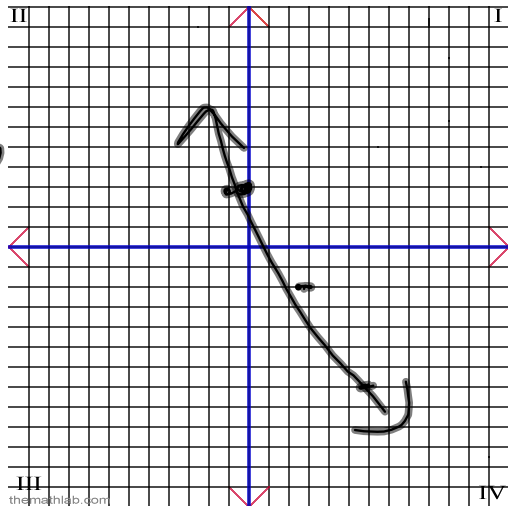
5) a) Graph the following equation.

$$3 - 5x = 3y - 6$$

$3y - 6 = 3 - 5x + 6$

$\frac{3y}{3} = -\frac{5x}{3} + \frac{9}{3}$

$y = -\frac{5}{3}x + 3$



b) State the perpendicular slope of the equation.

$+\frac{3}{5}$

Start

Slope(m): $-5/3$

y-intercept(b): 3

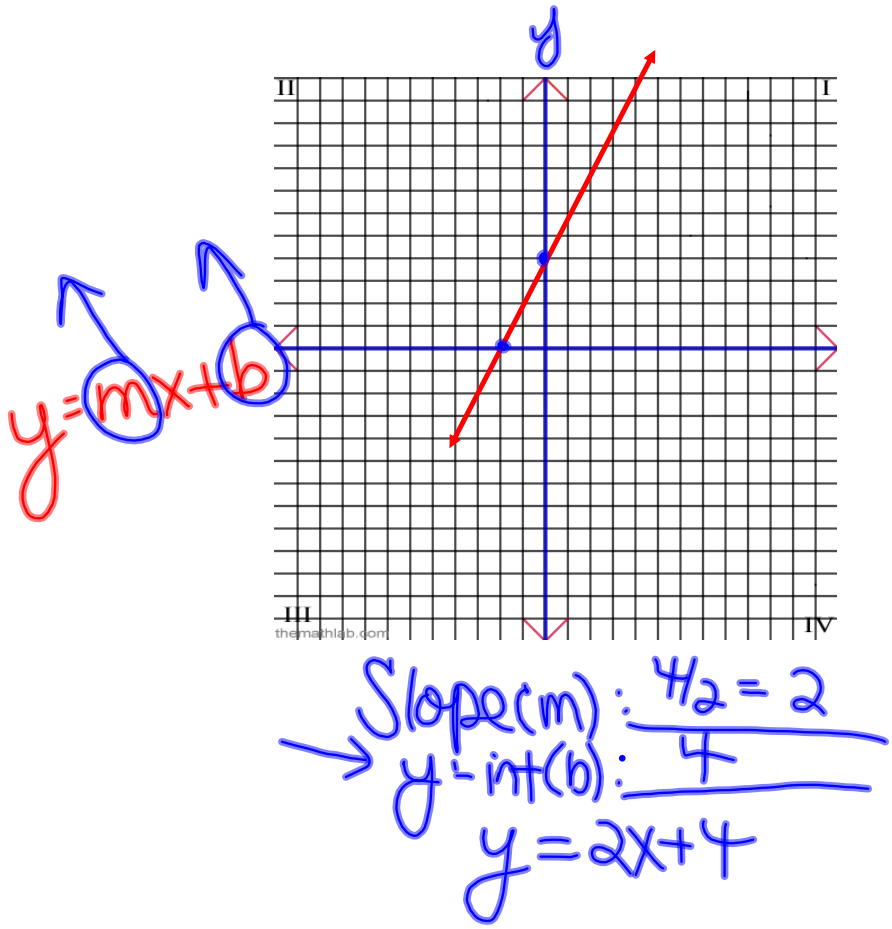
6) State the parallel slope of the equation

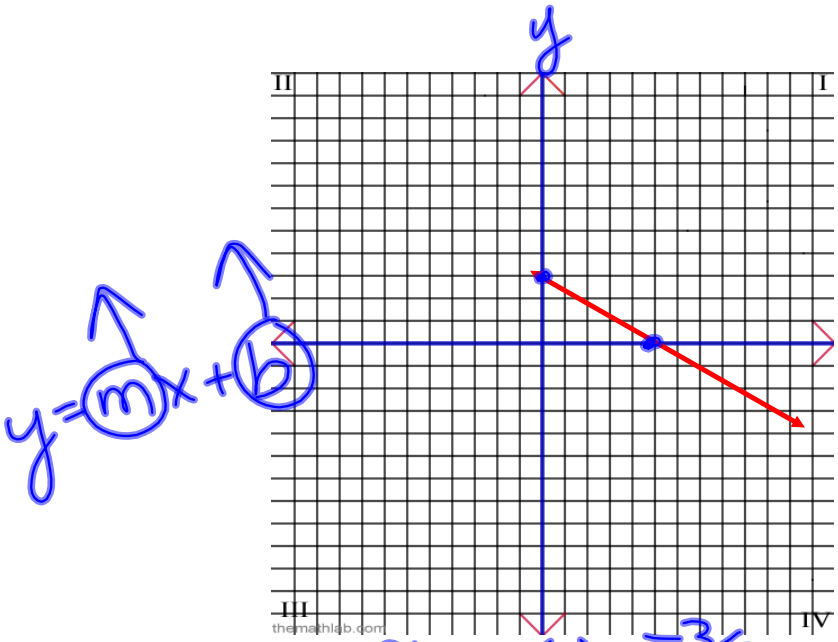
$$\frac{3}{4}y = 3x - 6$$

$\frac{3y}{3} = \frac{12x}{3} - \frac{24}{3}$

$y = 4x - 8$

$= 4$


y
II
I
III
IV
themathlab.com
y=mx+b
Slope(m): 4/2 = 2
y-int(b): 4
y=2x+4



Slope (m): $-\frac{3}{5}$

y-int (b): 3

$y = -\frac{3}{5}x + 3$