

3.5b Equations of Lines

- * \parallel & \perp lines
- * x & y intercepts

Find the missing slope for each

a) $y = \frac{2}{3}x - 1$

$\parallel m = \frac{2}{3}$
 $\perp m = -\frac{3}{2}$

b) $y = -4x + 3$

$\parallel m = -4$
 $\perp m = \frac{1}{4}$

c) $y = -\frac{5}{6}x + 5$

$\parallel m = -\frac{5}{6}$
 $\perp m = \frac{6}{5}$

2) Write an equation for line through
(5, 6) with Slope = -1

* use $y = mx + b$ ←

1st. put slope, x & y into the
 $y = mx + b$

$$6 = -1(5) + b$$

$$6 = -5 + b$$

$$11 = b$$

2nd. Plug slope & b into $y = mx + b$

$$y = -1x + 11$$

3) Find an equation thru $(2,3)$ and \perp to
 $y = -2x + 2$.

$$m = -\frac{2}{-1} 2$$

$$\perp m = \frac{1}{2}$$

$$(2,3) \therefore \frac{1}{2} = m$$

$$3 = \frac{1}{2}(2) + b$$

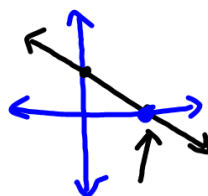
$$3 = 1 + b$$

$$2 = b$$

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

Graph $3x + 4y = 12$
 * In standard form $Ax + By = C$

1st - For x-intercept, Cover up the y



x is a # but
 $y = 0$

$$3x + 4y = 12$$

$$3x = 12$$

$$x = 4$$

$$(4, 0)$$

2nd - For y-intercept. Cover up x

$$3x + 4y = 12$$

$$\frac{4y}{4} = \frac{12}{4}$$

$$y = 3$$

$$(0, 3)$$

