To find slope

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

Two points

$(x_1, y_1)(x_2, y_2)$

$$y = mx + b$$

↑ slope

↑ y-Intercept

Investigating Slope and y-intercept
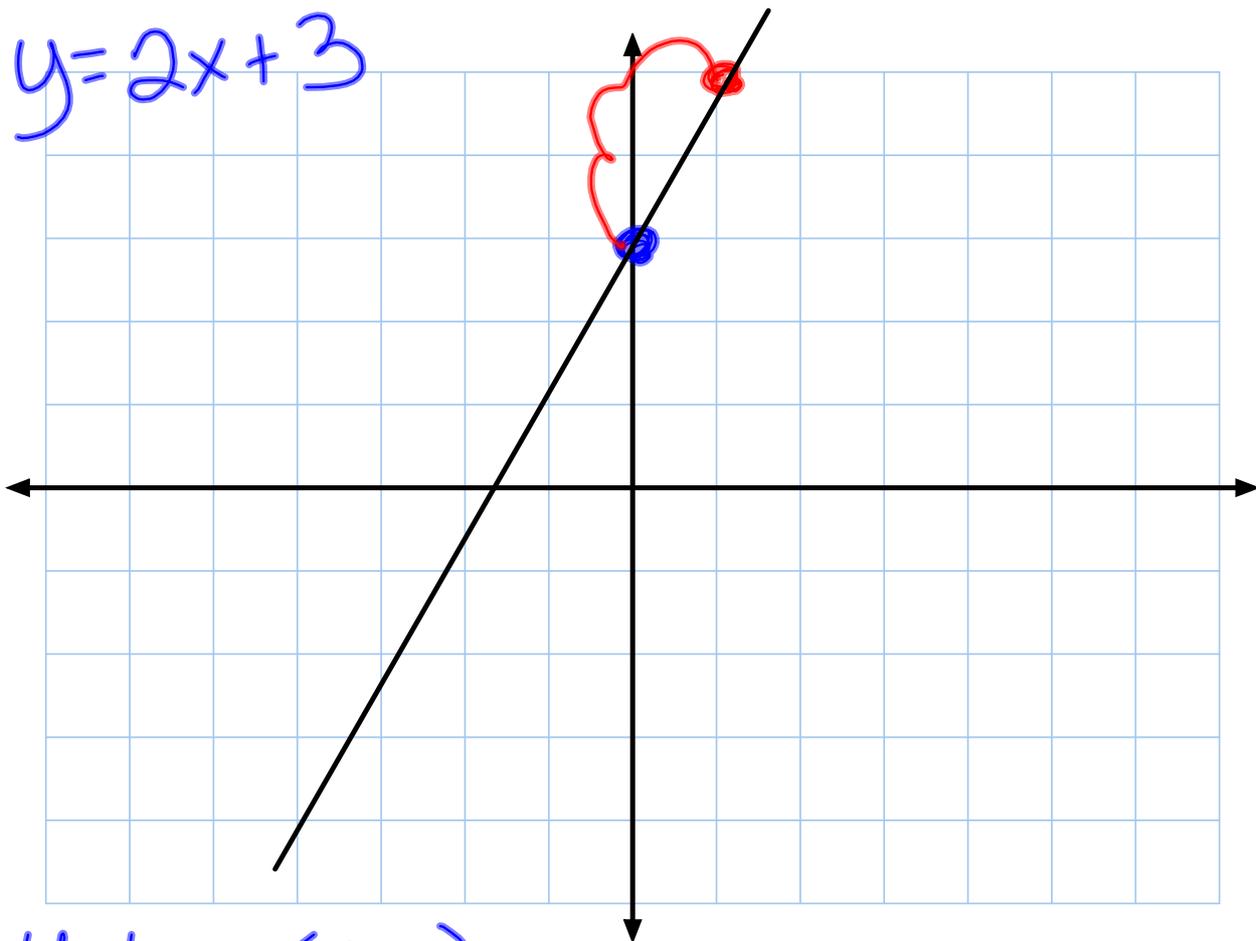
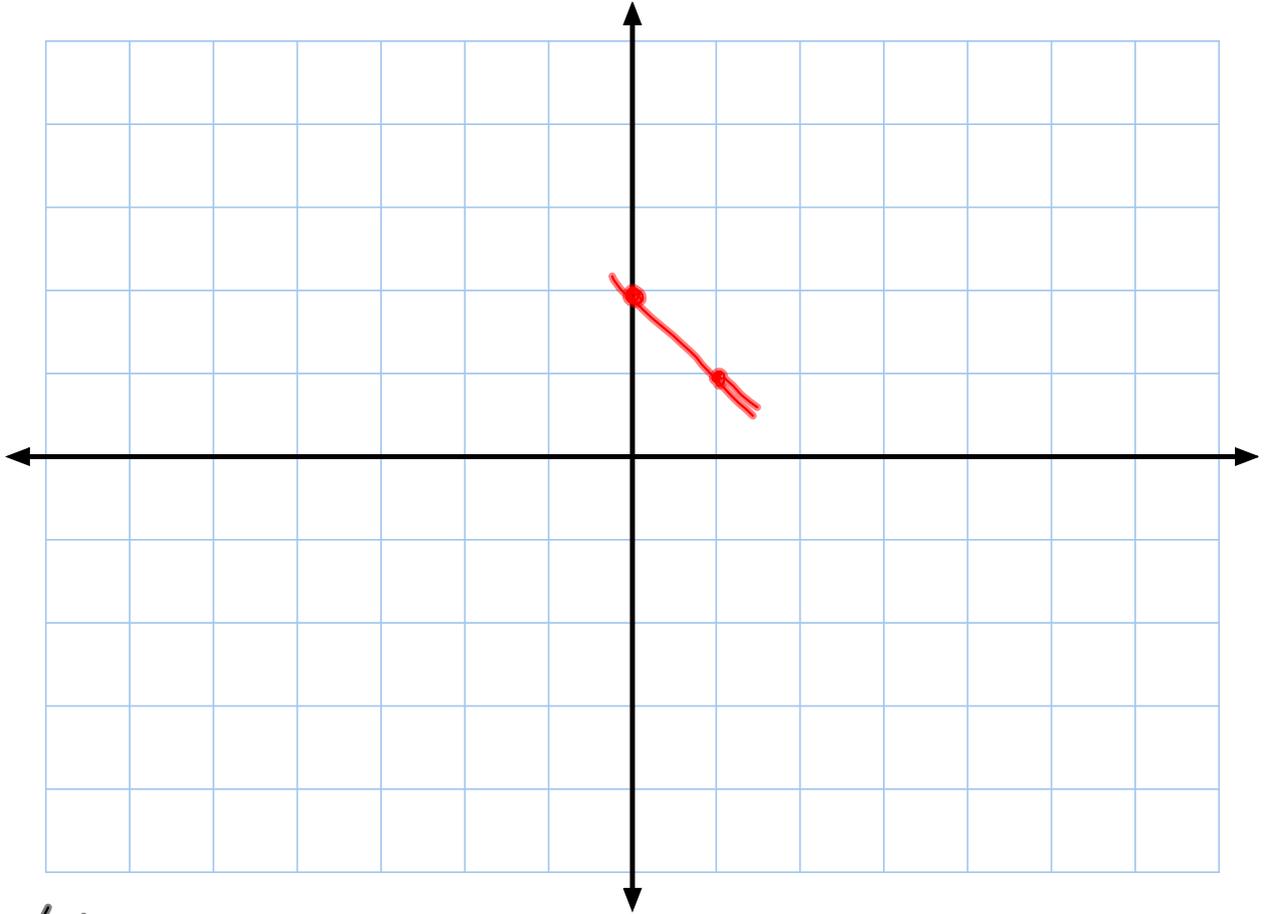| Equation	Points on graph of equation	Slope	y-intercept
$y = 2x + 3$	$(0, 3), (1, 5)$	2	$(0, 3)$
$y = -x + 2$	$(0, 2), (1, 1)$	-1	$(0, 2)$
$y = \frac{1}{2}x - 4$	$(0, -4), (1, -3\frac{1}{2})$	$\frac{1}{2}$	$(0, -4)$
$y = -2x$	$(0, ?), (1, ?)$	?	?
$y = 7$	$(0, ?), (1, ?)$	?	?

1 Copy and complete the table.

2 What do you notice about each equation and the slope of the line?

3 What do you notice about each equation and the y-intercept of the line?
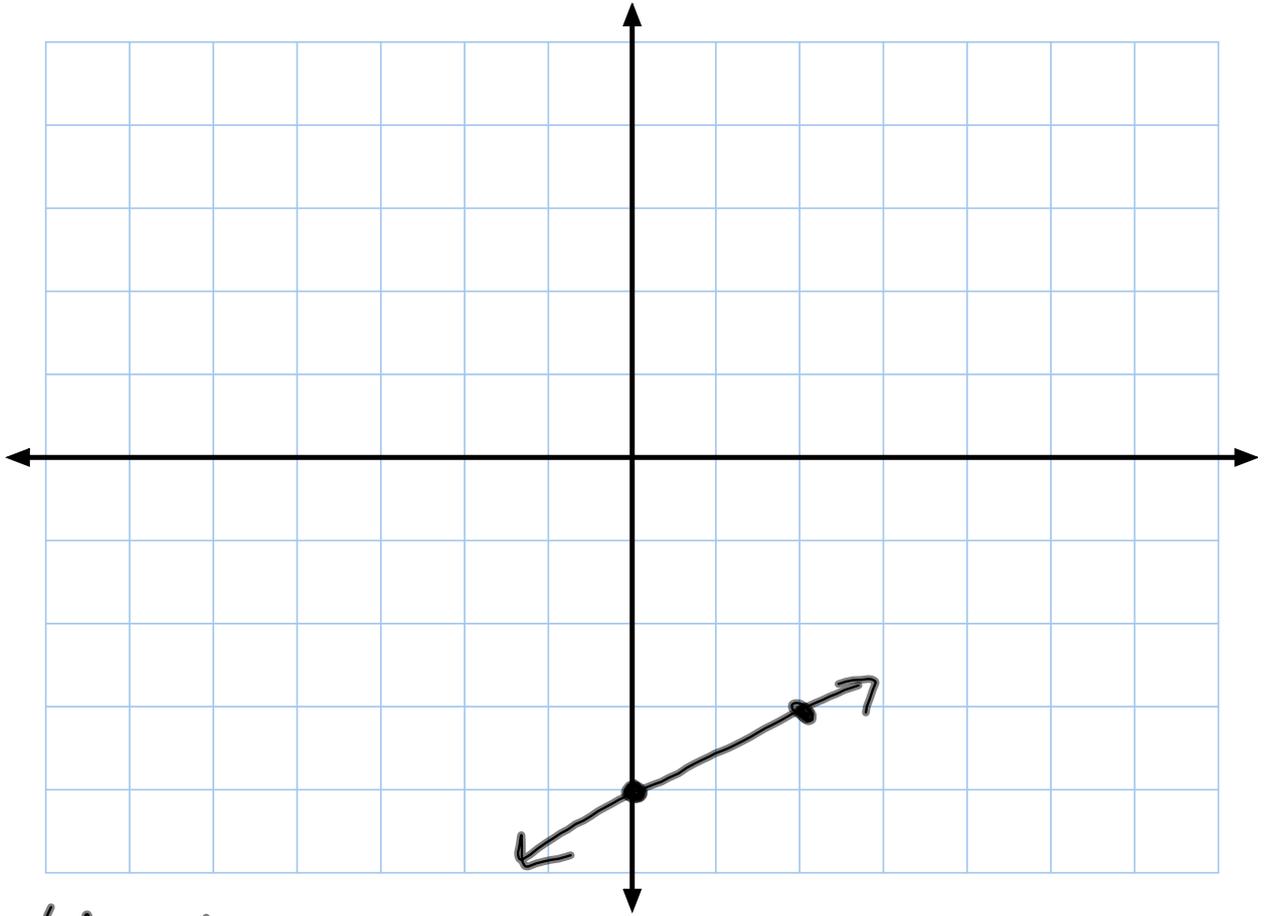
$$mx + b$$
$$\underset{\text{Slope}}{\uparrow} \quad \underset{\text{y-intercept}}{\uparrow}$$

$y = 2x + 3$

$y\text{-int}\ (0,3)$

$y = -x + 2$

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

Pg 86 #16-30 even