Write each of these equations in Slope-Intercept Form:

1.
$$y-6 = -4(x+3)$$

 $y-6 = -4x - 17$
 $+6 + 10$
 $y = -4x - 10$

2.
$$8x - 12y = 30 - 6x$$

 $-6x$
 $-12y = 30 - 6x$
 $-12 = 30 - 6x$
 $-12 = -12$
 $y = -2 \cdot 5 + \frac{2}{3}x$

Find the slope and intercepts for each line.

$$m = 2$$
 $m = \frac{-4}{10} - \frac{2}{5}$
 $x - m\tau = 1.5$ $x - m\tau = 4x = 24$ $x = 6$

$$X-10T = 1.5$$

 $D = 2x - 5$
 $Y-10T = 75$

2. 4x + 10y = 24

Write this equation in Standard Form:

$$y = \frac{7}{6}x - \frac{9}{4}$$

$$-\frac{7}{6}x \quad -\frac{7}{8}x$$

$$\left(-\frac{7}{6} \times + \gamma = -\frac{9}{4}\right) | 2$$

Without graph how can you tell if these points collinear?

$$(-2,6)$$
 $(0,2)$ $(1,0)$

Since the slope of \overline{AB} is the same as the slope of \overline{BC} and these are connected by Point B they must all lie on the same line.

Parallel and Perpendicular Lines:

Two lines are parallel if:

- 1. They have the same slope
- 2. They have different v-intercepts

Two lines are perpendicular if:

- 1. They have the slopes that are opposite reciprocals
- 2. The y-intercept doesn't matter!

Is each pair of lines parallel, perpendicular or neither?

1.
$$y = 6x - 5$$

 $y = -4 + 6x$

2.
$$y = \frac{1}{3}x + 7$$

 $y = 3x + 13$

3.
$$y = 4x - 1$$

 $y = -4x + 8$

4.
$$y = 8x + 1$$

 $8x - 4y = 12$

5.
$$y = -4x + 3$$

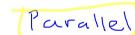
 $2x + 8y = 24$

6.
$$y = 2x - 5$$

 $6x - 3y = 15$

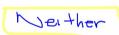
Is each pair of lines parallel, perpendicular or neither?

1.
$$y = 6x - 5$$
 $m = 16$ $b = -5$ 2. $y = \frac{1}{3}x + 7$ $m = \frac{1}{3}$ $y = -4 + 6x$ $m = 16$ $b = -4$ $y = 3x + 13$ $m = 3$



Slopes are the same and they have different y-intercepts.

Slopes are reciprocals but not opposites.



Slopes are opposites but not reciprocals

4.
$$y = 8x + 1$$

$$4y = 12$$
 Slopes are not the same or opposite reciprocals

 $y = \frac{12 - 8x}{-4} = -342x$ | Neither

