Sec 6-5: Parallel and Perpendicular Lines

2 lines are Parallel if they have:

- The same slope, but
- Different y-intecepts

Tell if each pair of lines is parallel or not.

1.

$y = 4x - 5$ $m=4$

$y = 5 + 4x$ $m=4$

Yes

2.

$y = -3x + 7$

$y = 3x - 2$

NO

3.

$y = 4x - 1$ $m=4$

$y = 4$ $m=0$

Horiz

NO

4.

$y = -2x + 15$

$\frac{6x}{-6x} + \frac{3y}{3} = \frac{45 - 6x}{3}$

$y = 15 - 2x$

NO, they are the same line

5.

$x = 4$

$y = 4$

No

6.

$12x + 8y = -32$

$-36x - 24y = 48$

$y = \frac{48 + 36x}{-24}$

$y = -2 - \frac{3}{2}x$

$y = \frac{-32 - 12x}{8}$

$y = -4 - \frac{3}{2}x$

Yes, they are parallel (||)

7.

$y = 8x$

$8x + 2y = 10$

$y = \frac{10 - 8x}{2}$

$y = 5 - 4x$

Not II