BE-1A | TUESDAY 12-1-09

SOLVE:

① $2x + 6 = 5x - 9$

② $3x - 2y = 15$ for $y$

③ $\frac{5x}{8} = \frac{7}{2}$

④ WHAT KIND OF EQUATION IS #③?

⑤ DEFINE A RELATION

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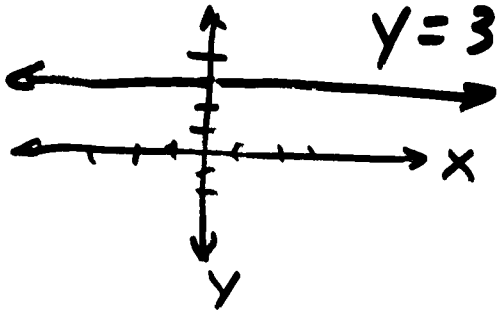
- HOMEWORK REVIEW: PG 221 #28-31

# TWO SPECIAL LINES:

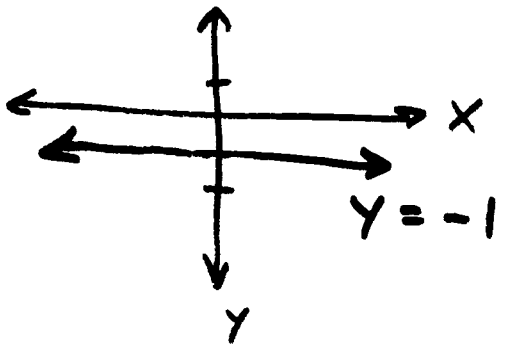
## HORIZONTAL LINES ↔

(Ex) $y = 3$

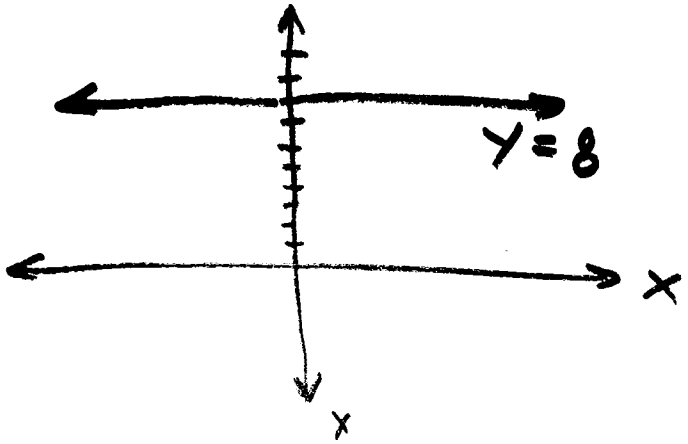



| X | Y=3 |
|---|---|
| -2 | 3 |
| -1 | 3 |
| 0 | 3 |
| 1 | 3 |
| 2 | 3 |
| ANYTHING | 3 |

(Ex) $y = -1$



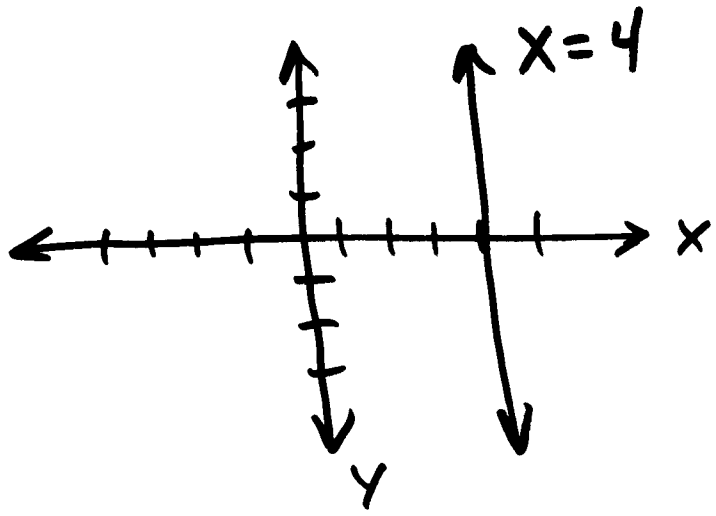

(Ex) $y = 8$



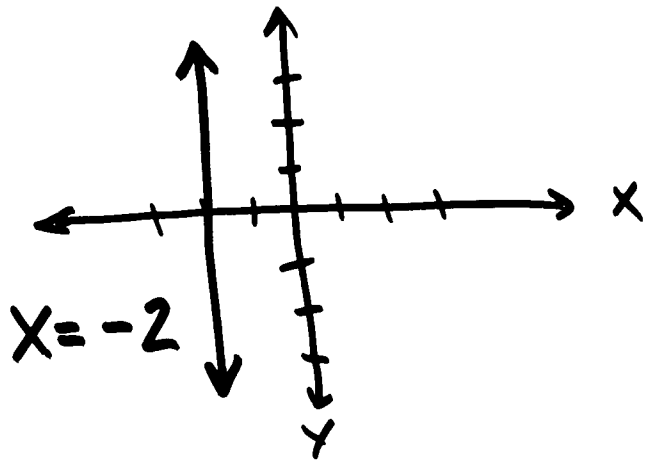
# Vertical Lines ↕

(Ex) $x = 4$

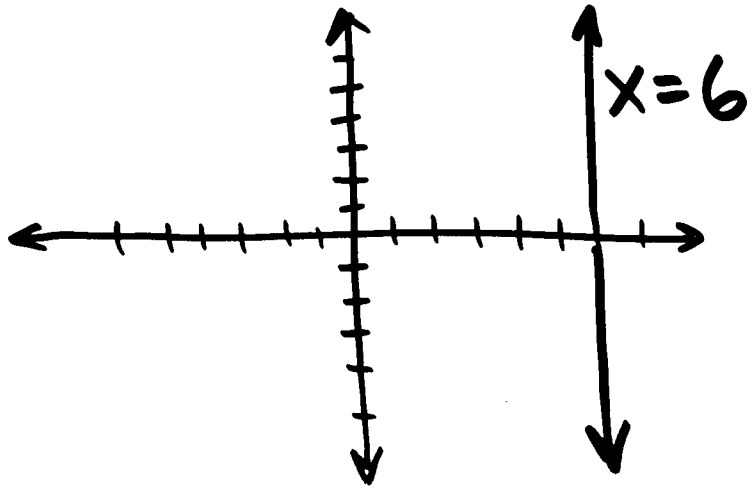
| x | y |
|---|---|
| 4 | anything |
| 4 | anything |
| 4 | anything |




(Ex) $x = -2$




(Ex) $x = 6$



**PRACTICE:** GRAPH $x + 4y = 10$

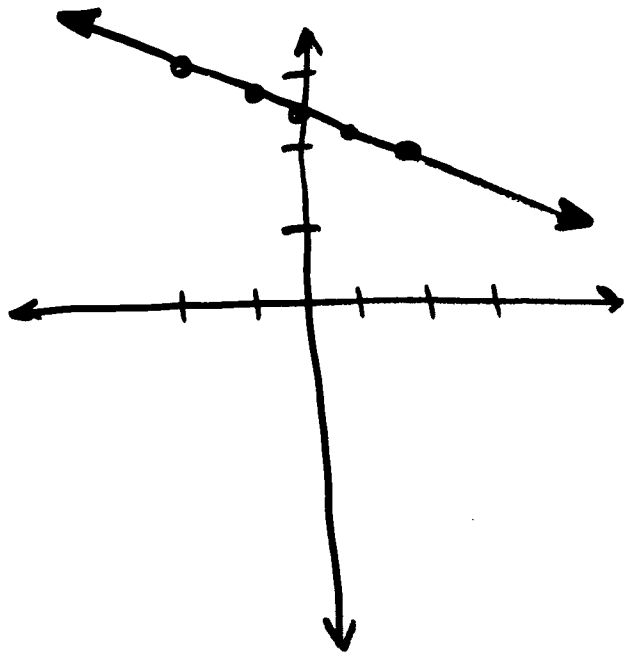
Solve for y: $x + 4y = 10$

$-x \qquad -x$

$$\frac{4y}{4} = \frac{-x + 10}{4}$$

$$y = -\frac{1}{4}x + \frac{5}{2}$$

| $x$ | $-\frac{1}{4}x + \frac{5}{2} = y$ |
|---|---|
| $-2$ | $-\frac{1}{4}(-2) + \frac{5}{2}$ |
| | $\frac{1}{2} + \frac{5}{2} = \frac{6}{2} = 3$ |
| $-1$ | $-\frac{1}{4}(-1) + \frac{5}{2}$ |
| | $\frac{1}{4} + \frac{10}{4} = \frac{11}{4} = 2\frac{3}{4}$ |
| $0$ | $\frac{5}{2} = 2\frac{1}{2}$ |
| $1$ | $-\frac{1}{4}(1) + \frac{5}{2}$ |
| | $-\frac{1}{4} + \frac{10}{4} = \frac{9}{4} = 2\frac{1}{4}$ |
| $2$ | $-\frac{1}{4}(2) + \frac{5}{2}$ |
| | $-\frac{1}{2} + \frac{5}{2} = \frac{4}{2} = 2$ |



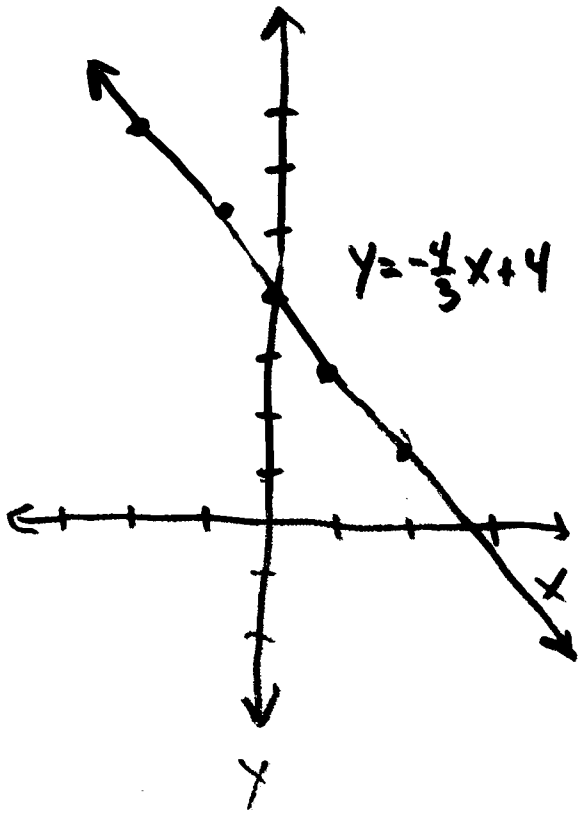
GRAPH: $4x + 3y = 12$

$-4x \qquad -4x$

$$\frac{3y}{3} = \frac{-4x + 12}{3}$$

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

| $x$ | $-\frac{4}{3}x + 4 = y$ |
|---|---|
| $-2$ | $-\frac{4}{3}(-2) + \frac{4}{1}$ <br> $\frac{8}{3} + \frac{12}{3} = \frac{20}{3} = 6\frac{2}{3}$ |
| $-1$ | $-\frac{4}{3}(-1) + \frac{4}{1}$ <br> $\frac{4}{3} + \frac{12}{3} = \frac{16}{3} = 5\frac{1}{3}$ |
| $0$ | $4$ |
| $1$ | $-\frac{4}{3}(1) + \frac{4}{1}$ <br> $-\frac{4}{3} + \frac{12}{3} = \frac{8}{3} = 2\frac{2}{3}$ |
| $2$ | $-\frac{4}{3}(2) + \frac{4}{1}$ <br> $-\frac{8}{3} + \frac{12}{3} = \frac{4}{3} = 1\frac{1}{3}$ |



Homework:

Pg. 221 #26, 27, 32, 33, 34