

Algebra I

Get Graph Paper and a protractor.

295: 1, 2, 15, 19, 20, 21, 25, 28, 39, 56, 100

① slope-intercept form; the slope: the y-intercept

② standard form: $2x + 3y = -6$ ← Ex.

$$\textcircled{15} 5x + y = 2$$

$$\textcircled{19} \begin{cases} x + 8y < 0 \end{cases}$$

$$\textcircled{20} -10x + 2y = 10$$

$$18x - 2y = -1$$

$$\textcircled{21} 2x - y = -19$$

$$\textcircled{25} 5x - y = 17$$

$$\textcircled{28} x - 2y = 21$$

$$\textcircled{39} y = -2$$

$$\textcircled{40} x = -3$$

$$\textcircled{41} x = 4$$

$$\textcircled{42} y = 0$$

$$\textcircled{43} x = -3\frac{1}{2}$$

$$\textcircled{44} y = 2\frac{1}{2}$$

$$\textcircled{45} x = 9$$

$$\textcircled{46} x + y = 9$$

$$\textcircled{47} y = 10$$

$$\textcircled{48} x + y = 10$$

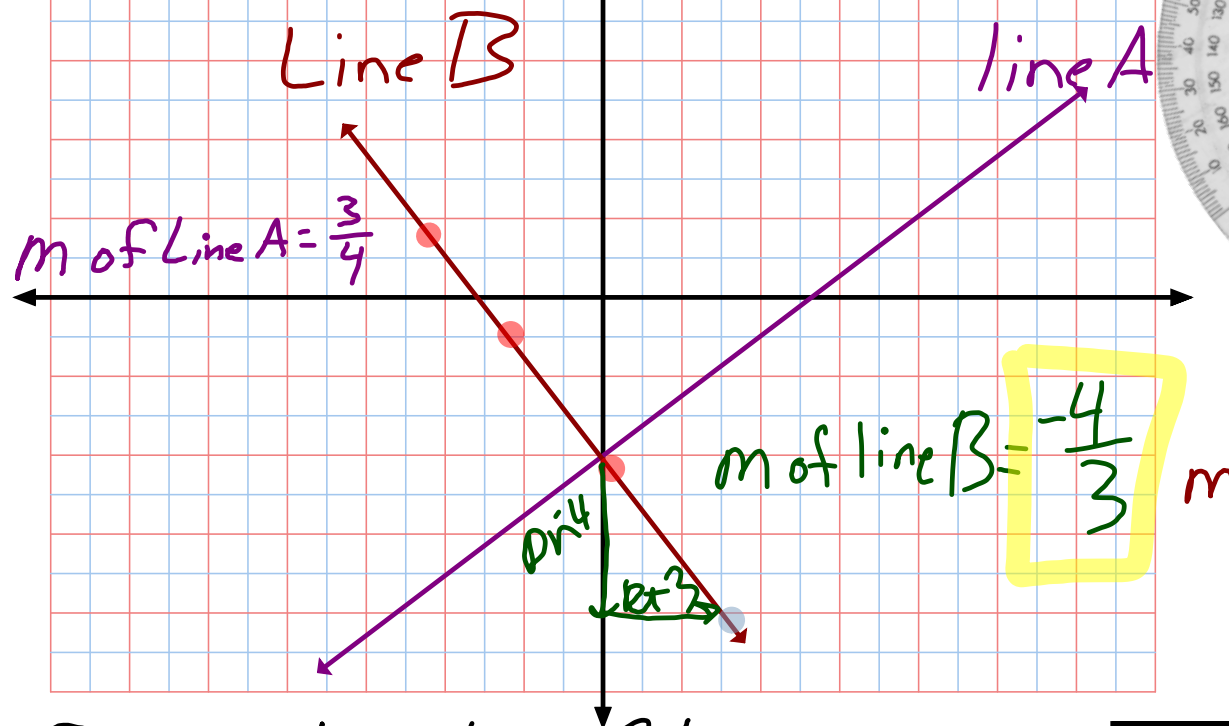
$$\textcircled{49} -x + y = 4$$

$$\textcircled{50} y = 1$$

$$\textcircled{51} x + y = 7$$

Perpendicular lines: 2 lines in the Same Plane that intersect at a Right or 90° angle.

Draw any line w/ Slope = $\frac{3}{4}$



Perpendicular Slopes
are opposite Recip.

$\perp \Rightarrow$ Perpendicular

Line A \perp Line B

Are $y = 3x + 2$ &

$y = -3x - 1$ \perp ?

To find out... multiply the Slopes to see if they equal (-1) .

$3 \cdot -3 = -9$ so... they are Not \perp

$y = \frac{3}{2}x + 1$ & $y = -\frac{2}{3}x + 1$

$\frac{3}{2} \cdot -\frac{2}{3} = -1$ so... they are \perp

Write in S-I form.
 the equation of the line
 passing through $(2, 5) + (4, 4)$
 $(x_1, y_1) \quad (x_2, y_2)$

*Process $m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$
 2 Pts \rightarrow Slope

Slope + 1 Pt \rightarrow P.S.F. \rightarrow S.I.F.

$$m = \frac{4 - 5}{4 - 2} = \frac{-1}{2}$$

$$y - y_1 = m(x - x_1)$$

$$y - 4 = -\frac{1}{2}(x - 4) \rightarrow \text{P.S.F.}$$

$$\begin{array}{r} y - 4 = -\frac{1}{2}x + 2 \\ +4 \qquad +4 \\ \hline y = -\frac{1}{2}x + 6 \end{array}$$

$$\begin{array}{r} y - y_1 = m(x - x_1) \\ y - 5 = -\frac{1}{2}(x - 2) \\ y - 5 = -\frac{1}{2}x + 1 \\ +5 \qquad +5 \\ \hline y = -\frac{1}{2}x + 6 \end{array}$$

Is this \perp
 to $y = 2x + 1$?

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

yes!

O.T.L. ⑥ Wk.st. 5.3+5.4. Due w/ Test Tomorrow

- ① Put the Blue box on Page 306 into notes.
- ② Pg. 309-311: 1,2,11,14,16,18,19,20,23-31 (o), 40-45 (a).
- ③ Have yesterday's O.T.L. ready to be graded. (tomorrow)
- ④ Chapter 5 Test Friday!!!

O.T.L.

pg 317
① 1, 7, 14, 20, 23, 26 } ~~Due w/ Test~~

Ready for Review Tomorrow at 7:00 AM