

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.

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

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

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

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

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

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

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

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

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

$$\textcircled{9} x = 4$$

$$\textcircled{43} y = 0$$

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

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

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

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

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

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

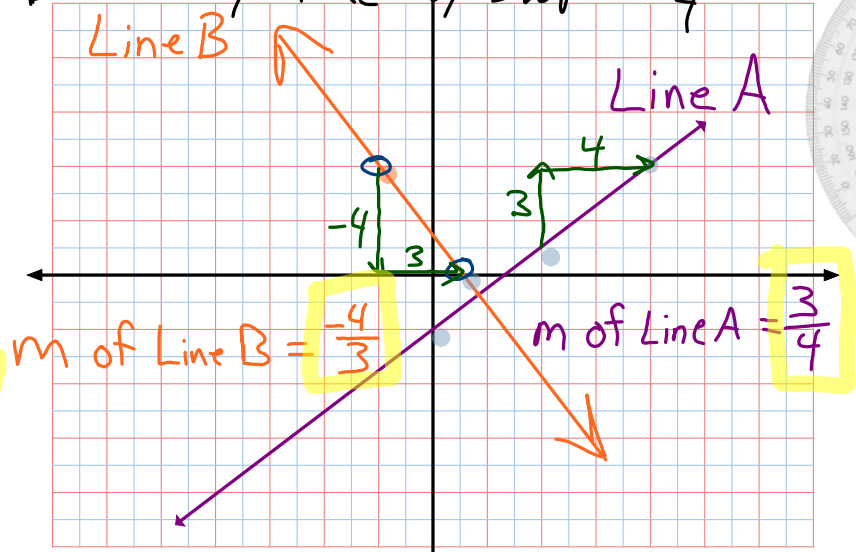
$$\textcircled{49} -x + y = 4$$

$$\textcircled{57} y = 1$$

$$\textcircled{59} x + y = 7$$

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 Reciprocals

$\perp \Rightarrow$ Perpendicular

Line A \perp Line B

Are $y = \boxed{3}x + 2$ &

$y = \boxed{-3}x - 1$ \perp ?

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

$3 \cdot -3 = \underline{-9}$ So...
these are NOT \perp !

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

$\cancel{\frac{3}{2}} \cdot \frac{-\cancel{2}}{\cancel{3}} = \frac{-1}{1} = \underline{\underline{-1}}$

Write in S-I form.
 the equation of the line
 passing through $(2, 5)$ and $(4, 4)$

$$\begin{matrix} (2, 5) & + & (4, 4) \\ (x_1, y_1) & & (x_2, y_2) \end{matrix}$$

*Process

2 Pts \rightarrow Slope

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

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

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

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

$$y - 5 = -\frac{1}{2}(x - 2)$$

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

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

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

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

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

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

So... yes they are \perp !

O.T.L. ⑥ Wk.st. 5.3+5.4. Due Today

- 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!!!

CLASS WORK

O.T.L. Done at Home

Ready for Review Tomorrow at 7:00 AM

O.T.L.

① Pg 317 }
1, 7, 14, 20, 23, 26 } ~~Due~~ Test