

Know your terms.

G.E = Generic Equation

S.I.F. = Slope-Intercept Form.

P.S.F. = Point-Slope Form.

S.F. = Standard Form.

\perp = Perpendicular Slopes

\parallel = Parallel

What is the G.E. for the S.I.F.?

$$\underline{y = mx + b}$$

What are the two things you have/need for the S.I.F.?

Slope \rightarrow y-intercept

Tuesday

What is the G.E. for the P.S.F.?

$$\underline{y - y_1 = m(x - x_1)}$$

What are the two things you have/need for the P.S.F.

Point on the line + Slope

What is the G.E. for the S.F. ?

$$\underline{Ax + By = C}$$

Where A & B are both
not zero

A & B are called
Integer Coefficients

Perpendicular Slopes are

opposite reciprocal

Parallel Slopes are

the same / equal

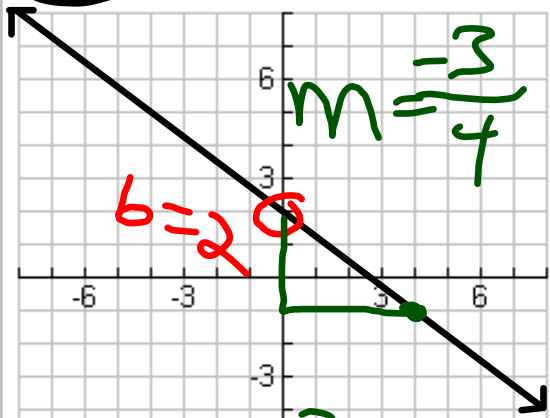
Write in S.I.F. ; Be sure to show All work; + the G.E.

$y = mx + b$

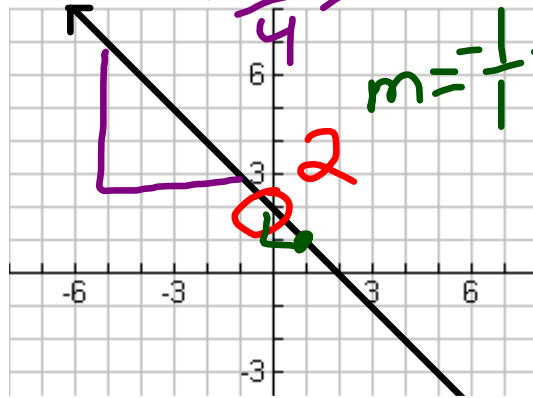
① Slope = -3, y-intercept = 1
 $y = -3x + 1$

$y = 0x + \frac{2}{3}$

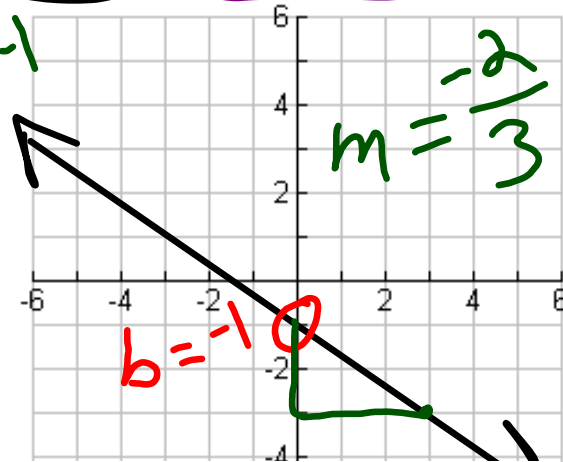
② y-intercept = $\frac{2}{3}$, Slope = 0
 ③
 ④
 ⑤ $y = \frac{2}{3}$



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



$y = -1x + 2$



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

Wednesday

write in P-S-F. the Equation
w/ the given Slope Passing
through the given Point
 $y - y_1 = m(x - x_1)$

① $(8, 8)$, $m = -4$

$$\underline{y - 8 = -4(x - 8)}$$

② $(-9, -3)$, $m = 4$

$$y - (-3) = 4(x - (-9))$$

$$\underline{y + 3 = 4(x + 9)}$$

③ $(0, 0)$, $m = -\frac{3}{4}$

$$y - 0 = -\frac{3}{4}(x - 0)$$

$$y = -\frac{3}{4}(x)$$

write in S-I-F the Equation
w/ the given Slope Passing
through the given point.

$$\textcircled{1} (3, 4), m = 1$$
$$y - y_1 = m(x - x_1)$$
$$y - 4 = 1(x - 3)$$
$$y - 4 = 1x - 3$$
$$\begin{array}{r} +4 \qquad +4 \\ \hline y = 1x + 1 \end{array}$$

$$\textcircled{2} (-7, 5), m = 0$$
$$y - y_1 = m(x - x_1)$$
$$y - 5 = 0(x - (-7))$$
$$y - 5 = 0$$
$$\begin{array}{r} +5 \qquad +5 \\ \hline y = 5 \end{array}$$

$$\textcircled{3} (1, -5), m = -5$$
$$y - y_1 = m(x - x_1)$$
$$y - (-5) = -5(x - 1)$$
$$y + 5 = -5x + 5$$
$$\begin{array}{r} -5 \qquad -5 \\ \hline y = -5x \end{array}$$

Thursday Write in S-I-F. the equation parallel to the given line & passing through the given point

① $y = 5x + 2$, $(1, 0)$

$m = 5$

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

$y - 0 = 5(x - 1)$

$y = 5x - 5$

② $y = \frac{2}{3}x + 3$, $(4, 2)$

$m = \frac{2}{3}$

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

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

$y - 2 = \frac{2}{3}x - \frac{8}{3} + \frac{6}{3}$

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

$\frac{2}{3} \cdot \frac{4}{1} = \frac{8}{3}$

$\frac{2}{3} + \frac{2}{3} = \frac{4}{3}$
 $-\frac{8}{3} + \frac{6}{3} = -\frac{2}{3}$

Thursday Write in S-F the equation parallel to the given line & passing through the given point

① $y = -2x + 5$, $(0, 6)$

$m = -2$

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

$y - 6 = -2(x - 0)$

$y - 6 = -2x$

$+2x$
 $\hline 2x + y - 6 = 0$

$+6$ $+6$
 $\hline \hline \underline{2x + y = 6}$

② $y = \frac{1}{6}x + 3$, $(-6, -6)$

$m = \frac{1}{6}$

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

$y - (-6) = \frac{1}{6}(x - (-6))$
 $6(y + 6) = (x + 6)$

$6y + 36 = x + 6$

$-x$ -36 $-x$ -36
 $\hline -1x + 6y = -30$

Thursday Write in S-I-F the equation perpendicular to the given line & passing through the given point

① $y = -5x + 6$, $(0, 6)$

$m = \frac{1}{5}$ $y - y_1 = m(x - x_1)$

② $y = \frac{1}{7}x$, $(2, -1)$

$m = -7$ $y - y_1 = m(x - x_1)$

Thursday Write in S-F the equation
Perpendicular to the given line &
Passing through the given point

$$\textcircled{1} y = 7x + 1, (2, 1)$$

$$m = -\frac{1}{7} \quad y - y_1 = m(x - x_1)$$

$$\textcircled{2} y = -\frac{1}{4}x - 3, (7, 7)$$

$$m = 4 \quad y - y_1 = m(x - x_1)$$