11-6-13
5$^{\text{th}}$ Geo

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

Give the equation in SIF
that goes through (1,8)
and is parallel to $y = \boxed{2}x - 5$.

$m = 2$
$\therefore$ parallel
slope is 2.

$y - y_1 = m(x - x_1)$
$y - 8 = 2(x - 1)$
$y - 8 = 2x - 2$
$\underline{ +8 +8}$
$y = 2x + 6$

$m = 2$

$m = -\frac{1}{2}$
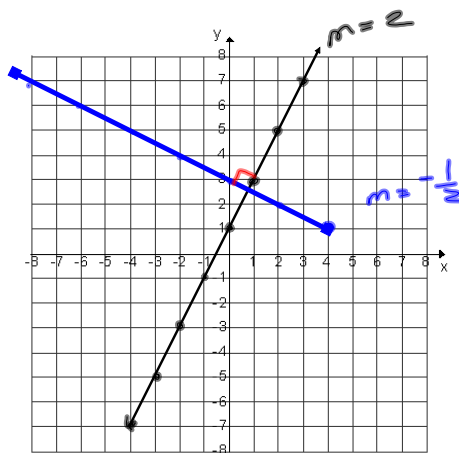
Give me the equation in SIF
that goes through (2,6) and
is perpendicular ($\perp$) to
$y = \boxed{-\frac{1}{2}}x + 7$.

$m = -\frac{1}{2}$
$\therefore$
$\perp m = 2$

$y - y_1 = m(x - x_1)$
$y - 6 = 2(x - 2)$
$y - 6 = 2x - 4$
$\underline{ +6 +6}$
$y = 2x + 2$

Give equation in SIF that
goes through $(\underset{x_1 \ y_1}{1, 7})$
and is perpendicular to $y = \boxed{\dfrac{1}{3}} x + 4$

$$y - y_1 = m(x - x_1) \qquad m = \dfrac{1}{3}$$

$$\therefore \perp m = -3$$

$$y - 7 = -3(x - 1)$$

$$y - 7 = -3x + 3$$

$$\underline{ + 7 \qquad\qquad + 7}$$

$$y = -3x + 10$$

11-6-13
H Geo
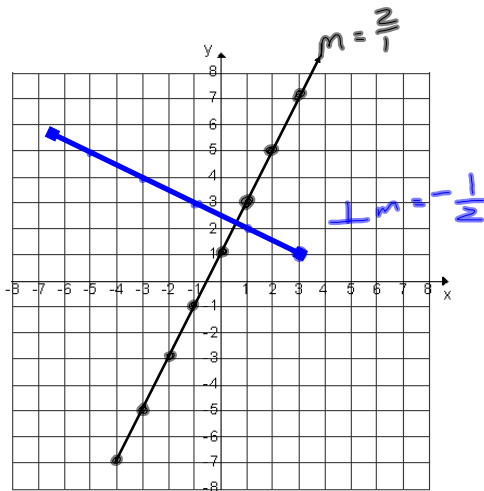
$$y - y_1 = m(x - x_1)$$

Give the equation in slope intercept form (SIF) that goes through (2,4) and is perpendicular ($\perp$) to

$y = \boxed{2}x - 9.$

$m = 2$

$\therefore \perp m = -\frac{1}{2}$

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

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

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

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

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

Give the equation in SIF that goes through (-3, 70) and is parallel to $y = 10x - 1.$

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

$y - 70 = 10(x + 3)$

$y - 70 = 10x + 30$

$+70 +70$

$y = 10x + 100$

3

Give the equation that
is $\perp$ to $y = \boxed{\frac{1}{4}}x + 2$ and
goes through $(1,7)$.

$m = \frac{1}{4}$

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

$y - 7 = -4(x - 1)$

$y - 7 = -4x + 4$
$+7 +7$

$y = -4x + 11$

Give the equation in SIF
that goes through
$(2,1)$ and $(4,11)$.

$m = \frac{\Delta y}{\Delta x} = \frac{11 - 1}{4 - 2} = \frac{10}{2} = 5$

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

$y - 1 = 5(x - 2)$

$y - 1 = 5x - 10$
$+1 +1$

$y = 5x - 9$