Lecture 5

(16,-12) & (-8,-15) Equation: $y = \frac{1}{8}x\text{-}14$ x-int: (112 , 0) y-int: (0 , -14)

$$m = \frac{-15 - (-12)}{-8 - 16} = \frac{-3}{-24} = \frac{1}{8} \quad \rightarrow \quad y - (-12) = \frac{1}{8}(x - 16) \quad \rightarrow \quad y + 12 = \frac{1}{8}x - 2$$

$6x - 7 + 3y = 9x - 2y + 8 \quad \rightarrow \quad 5y = 3x + 15 \quad \rightarrow \quad y = \frac{3}{5}x + 3$

x-int: (–5 , 0)   y-int: (0 , 3)

Parallel to (–5,2): $y - 2 = \frac{3}{5}(x - (-5)) \rightarrow y - 2 = \frac{3}{5}x + 3 \rightarrow y = \frac{3}{5}x + 5$

x-int: $\left(-\frac{25}{3}, 0\right)$ y-int: (0 , 5)

Perpendicular to (-9,4): $y - 4 = -\frac{5}{3}(x - (-9)) \rightarrow y - 4 = -\frac{5}{3}x - 15 \rightarrow y = -\frac{5}{3}x - 11$

x-int: $\left(-\frac{33}{5}, 0\right)$ y-int: (0 , –11)