15. a) $4x - 3y = 15$

$-\quad 4x + 8y = 4$

$-11y = 11$

$y = -1$

$x = 3$

b) $\frac{3}{15}\left(\frac{2x-3}{6}\right) + \frac{5}{15}\left(\frac{2y-4}{3}\right) = \frac{15}{15}(7)$

$6x - 9 + 10y - 20 = 105$

$6x + 10y = 134$

$6\left(\frac{2x+6}{6}\right) - 6^{2}\left(\frac{y+7}{3}\right) = \frac{6}{-1}$

$2x + 6 = 2y - 14 = -6$

$2x - 2y = 2$

$6x + 10y = 134$

$6x - 6y = 6$

$16y = 128$

$y = 8$

$x = 9$

c) $3x + y = 5$ ① $\times 4$

$-5x + 4y = -1$

$12x + 4y = 20$

$-\quad -5x + 4y = -1$

$17x = 21$

$x = \frac{21}{17}$

substitute $x = \frac{21}{17}$ into ①

$3\left(\frac{21}{17}\right) + y = 5$

$\frac{63}{17} + y = 5$

$y = \frac{85}{17} - \frac{63}{17}$

$y = \frac{22}{17}$

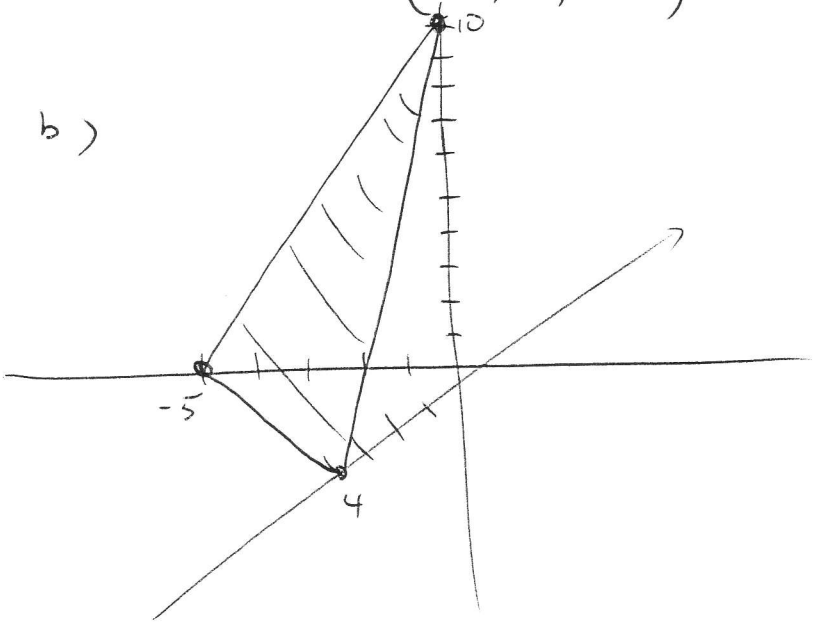
16.

a) $x_{int} \rightarrow (4, 0, 0)$

$y_{int} \rightarrow (0, -5, 0)$

$z_{int} \rightarrow (0, 0, 10)$

b)



c) $x = 50$

$y = -20$

$5(50) - 4(-20) + 2z = 20$

$2z = -310$

$z = -155$