p. 337 #3a) Solve graphically.

① $3x + y - 1 = 0$
② $2x = y - 6$

S1) let calculate Intercepts.

① $x = 0$

$3(0) + y - 1 = 0$

$y - 1 = 0$

$y = 0 + 1 = 1$

y-int. $(0, 1)$

$y = 0$

$3x + (0) - 1 = 0$

$3x - 1 = 0$

$\dfrac{3x}{3} = \dfrac{1}{3}$

$x = \dfrac{1}{3}$ $\left(\dfrac{1}{3}, 0\right)$

② $x = 0$

$2(0) = y - 6$

$0 = y - 6$

$6 = y$

$\boxed{y = 6}$ $(0, 6)$

$y = 0$

$2x = (0) - 6$

$2x = -6$

$x = \dfrac{-6}{2} = -3$

$(-3, 0)$
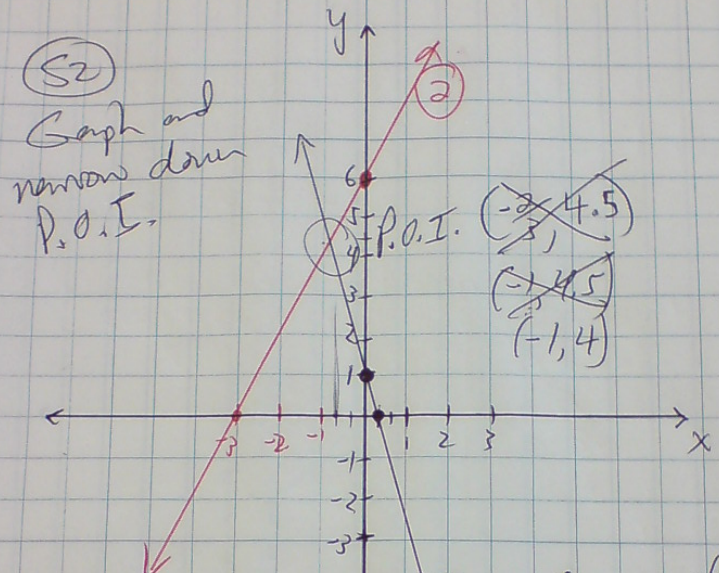
S2

Graph and narrow down P.O.I.

P.O.I. $\left(-\frac{2}{3}, 4.5\right)$ ~~crossed out~~

$\left(-\frac{1}{2}, 4.5\right)$ ~~crossed out~~

$(-1, 4)$

S3) Check POI with both equations

Then retry P.O.I.

①
$LS = 3\left(-\frac{2}{3}\right) + (4.5) - 1$ $RS = 0$

$LS = -2 + 4.5 - 1$

$LS = 2.5 - 1$

$LS = 1.5$

$LS \neq RS$

$\therefore \left(-\frac{2}{3}, 4.5\right)$ is not true.

① $3(-1) + 4 - 1$ $RS = 0$

$= -3 + 4 - 1$

$= 1 - 1$

$LS = 0$

$LS = RS$

② $LS = 2x$ $RS = 4 - 6$

$= 2(-1)$ $= -2$

$= -2$ $LS = RS$

$\therefore P.O.I. (-1, 4)$.