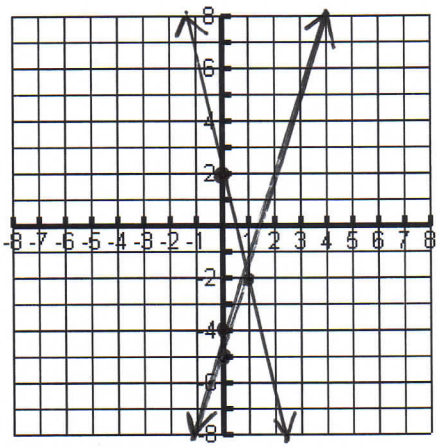
Linear Systems: Choose a Method

Date Notes

REVIEW 3 METHODS:



1. Graph and solve the system.
   $y = 3x - 5$ $y = -4x + 2$

POI = (-2 , 1)

2. Solve the system by substitution.
   $x - 2y = 7$ ① $x = 2y + 7$ ③
   $2x - 3y = 13$ ②

Sub. ③ into ②

$2(2y+7) - 3y = 13$

$4y + 14 - 3y = 13$

$y = 13 - 14$

$\boxed{y = -1}$

Sub. $y = -1$ into ③

$x = 2(-1) + 7$

$x = -2 + 7$

$\boxed{x = 5}$

$\therefore$ POI is $(5, -1)$

3. Solve the system by elimination.
   $3x + 2y = 7$ $\times 2$ $= 7$ $6x + 4y = 14$
   $6x + y = -1$ $-\ 6x + y = -1$

$0 + 3y = 15$

$\frac{3y}{3} = \frac{15}{3}$

$\boxed{y = 5}$

Sub. $y = 5$ into ①

$3x + 2(5) = 7$

$3x + 10 = 7$

$3x = 7 - 10$

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

$\boxed{x = -1}$

$\therefore$ POI is $(-1, 5)$