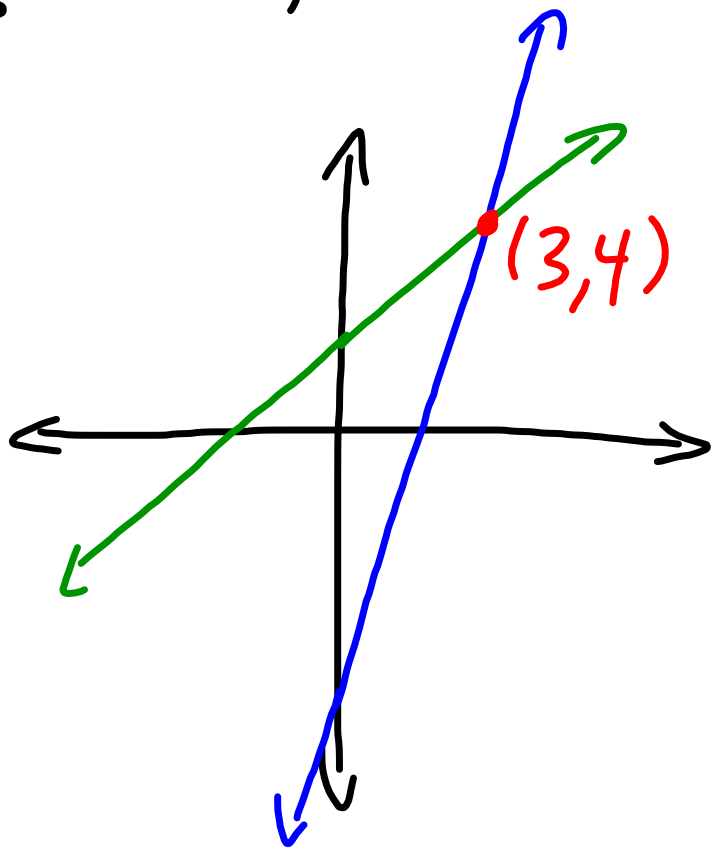
1) $2x - 3y = -6$

$3x - y = 5$

$y = 3x - 5$

$y = \frac{2}{3}x + 2$

(3,4)



(2)

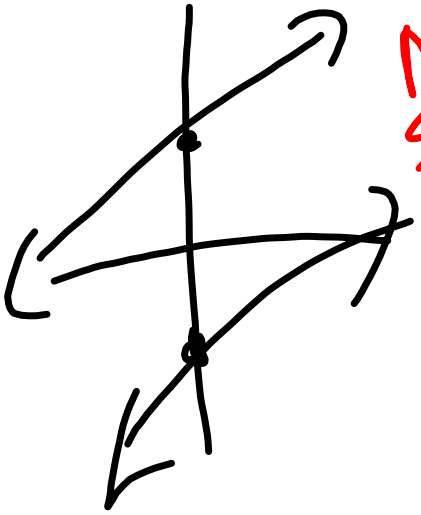
$2x - 3y = 7 \Rightarrow 6x - 9y = 21$

$-6x + 9y = 4 \Rightarrow -6x + 9y = 4$

$0 \neq 25$

$y = \frac{2}{3}x + \frac{4}{9}$

$y = \frac{2}{3}x - \frac{7}{3}$



No solution!

③ $2x-3y=7 \Rightarrow$

$-6x+9y=-21 \Rightarrow$

$0=0$

$y=\frac{2}{3}x-\frac{7}{3}$

$y=\frac{2}{3}x-\frac{7}{3}$

The same line

Infinitely many solutions.

Solve $ax+b=3x-5$ for x.

$ax+b+5=3x$

$b+5=3x-ax$

$b+5=x(3-a)$

$\frac{b+5}{3-a}=x$

$x=\frac{b+5}{3-a}\cdot\frac{-1}{-1}=\frac{-b-5}{-3+a}$

$\sqrt{12}$ Simplify

$\sqrt{4}\sqrt{3}$

$2\sqrt{3}$

Find $\sqrt{-9}$ allowing complex numbers.

$\sqrt{-1}\sqrt{9}$

$i3$

$3i$

$\sqrt{-25}$

$5i$

$\sqrt{16} = 4$ because $4^2 = 16$

$\sqrt{81} = 9$ " $9^2 = 81$

$i^2 = -1$

$\sqrt{-1} = i$

$i^2 = -1$

$\sqrt{-18}$

$\sqrt{9}\sqrt{2}\sqrt{-1}$

$3\sqrt{2}i$ ← Not correct form

$3i\sqrt{2}$ ← Correct form

Solve $x^2 - 14x + 53 = 0$ allowing complex #s.

$$x = \frac{-(-14) \pm \sqrt{(-14)^2 - 4(1)(53)}}{2(1)}$$

$13^2 = 169$

$14^2 = 196$

$$= \frac{14 \pm \sqrt{196 - 212}}{2}$$

$$= \frac{14 \pm \sqrt{-16}}{2}$$

$$= \frac{14 \pm 4i}{2}$$

$$= \frac{14}{2} \pm \frac{4i}{2}$$

$$\boxed{x = 7 \pm 2i}$$