

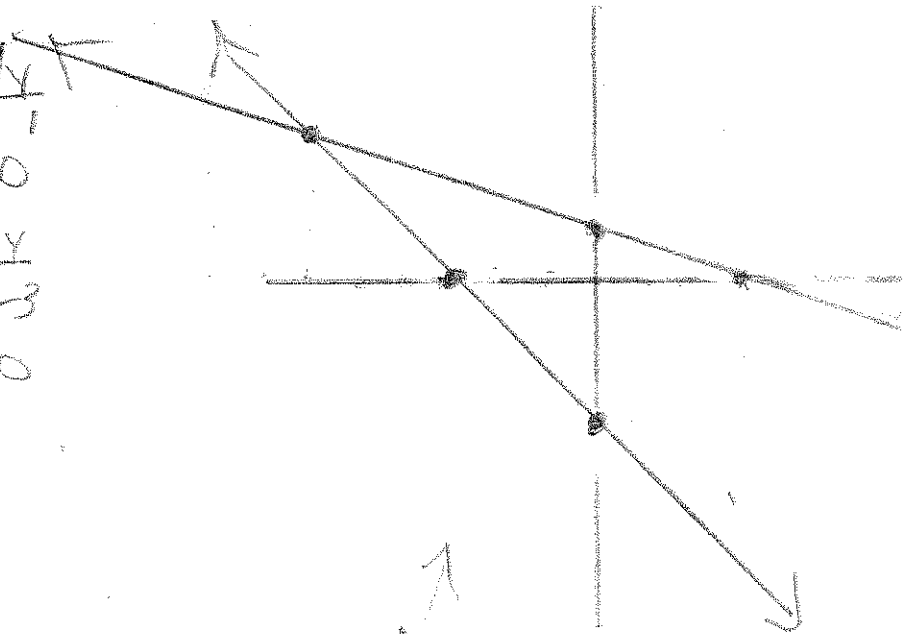
1. $x + 3y = 3$

x	y
0	1
3	0

$x + y = -3$

x	y
0	-3
-3	0

$(-6, 3)$



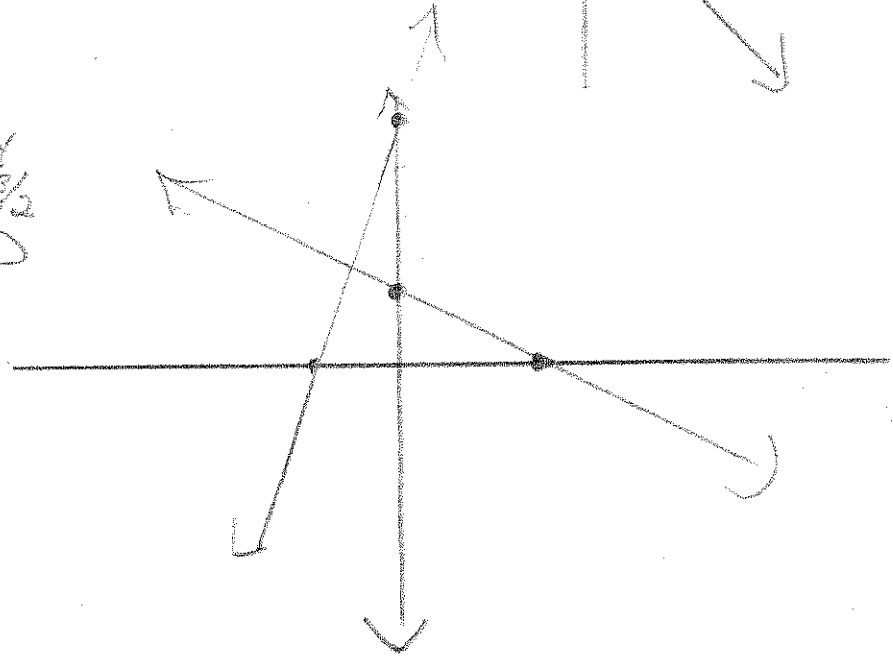
2. $x + 2y = 3$

x	y
0	$\frac{3}{2}$
3	0

$3x - y = -5$

x	y
0	5
$-\frac{5}{3}$	0

$(-1, 2)$

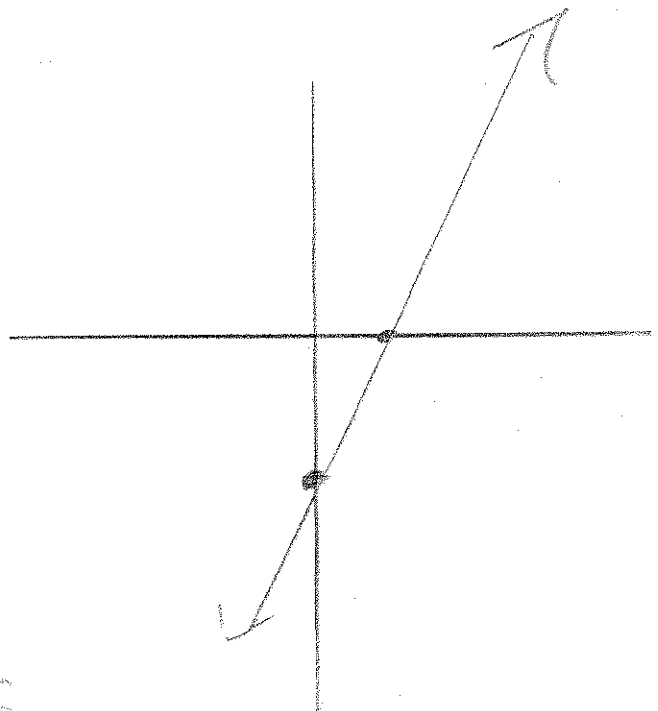


3. $y = 2x - 3$

x	y
0	-3
$\frac{3}{2}$	0

$4x = 2y + 6$

x	y
0	-3
$\frac{3}{2}$	0



infinite solutions

$$4. \quad 3x - y = -2$$

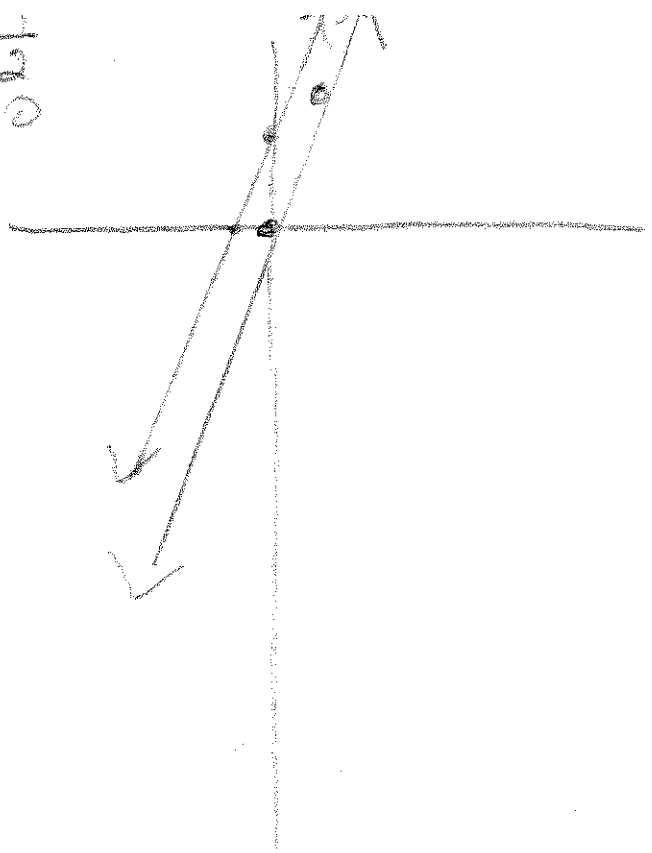
$$\begin{array}{r|l} 0 & 2 \\ -2/3 & 0 \end{array}$$

$$3x - y = 0$$

$$\begin{array}{r|l} x & y \\ 0 & 0 \end{array}$$

$$\begin{array}{r|l} 1 & 3 \end{array}$$

no solution



$$5. \quad y = 6x$$

$$2x + 3y = -20$$

$$2x + 3(6x) = -20$$

$$2x + 18x = -20$$

$$20x = -20$$

$$x = -1$$

$$y = 6(-1)$$

$$y = -6$$

$$(-1, -6)$$

$$6. \quad \begin{array}{l} x - 2y = 3 \\ 4x - 8y = 12 \end{array}$$

$$x = 2y + 3$$

$$4(2y + 3) - 8y = 12$$

$$8y + 12 = 12 + 8y$$

infinite solutions

$$7. \begin{cases} x - 3y = -4 \\ 2x + 6y = 5 \end{cases}$$

$$\begin{aligned} x &= 3y - 4 \\ 2(3y - 4) + 6y &= 5 \\ 6y - 8 + 6y &= 5 \\ -8 &= 5 \end{aligned}$$

no solution

$$8. \begin{cases} x - y = 1 \\ x + y = -9 \end{cases}$$

$$\begin{aligned} 2x &= -8 \\ x &= -4 \end{aligned}$$

$$\begin{aligned} -4 - y &= 1 \\ -y &= 5 \\ y &= -5 \end{aligned}$$

$(-4, -5)$

$$9. \begin{cases} 2x + 4y = 10 \\ x - 4y = 2 \end{cases}$$

$$\begin{aligned} 3x &= 12 \\ x &= 4 \end{aligned}$$

$$\begin{aligned} 4 - 4y &= 2 \\ -4y &= -2 \\ y &= \frac{1}{2} \end{aligned}$$

$(4, \frac{1}{2})$

$$10. \begin{cases} 2x - y = -1 \\ 3x - 2y = 1 \end{cases} \cdot 2$$

$$3x - 2y = 1$$

$$\begin{aligned} -4x + 2y &= 2 \\ 3x - 2y &= 1 \end{aligned}$$

$$\begin{aligned} -x &= 3 \\ x &= -3 \end{aligned}$$

$$\begin{aligned} 2(-3) - y &= -1 \\ -6 - y &= -1 \\ -y &= 5 \\ y &= -5 \end{aligned}$$

$(-3, -5)$

$$11. \begin{cases} x - 2y = 6 \\ -2x + 4y = -12 \end{cases} \cdot 2$$

$$\begin{aligned} 2x - 4y &= 12 \\ -2x + 4y &= -12 \end{aligned}$$

$$\begin{aligned} 0 + 0 &= 0 \\ 0 &= 0 \end{aligned}$$

infinite solutions