Exercise 8.3

Q.1 $x+y=0 \text{——}(\text{I})$ and $2x-y+3=0-(\text{II})$

From equation I

from equation II

$y=-x$

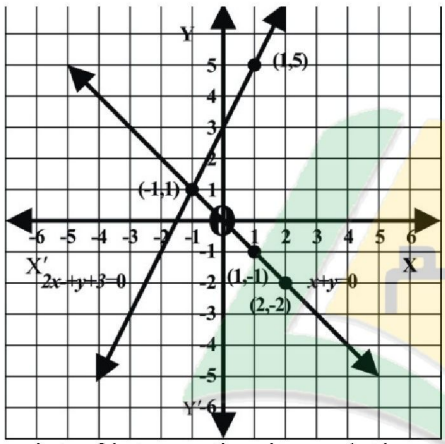
$2x-y+3=0$

$2x+3=y$

$y=2x+3$

x	$y=-x$	(x,y)
1	$-1(1)=-1$	(1,-1)
2	-(2)=-2	(2,-2)

x	$y=2x+3$	(x,y)
1	2(1)+3 = 5	(1,5)
–1	2(-1)+3=1	(-1,1)



The point of intersection is a solution set

Solution Set $=\{(-1,1)\}$

Q.2 $x-y+1=0$

$x-2y=-1$

$x+1=y$

$x+1=2y$

$y=x+1$

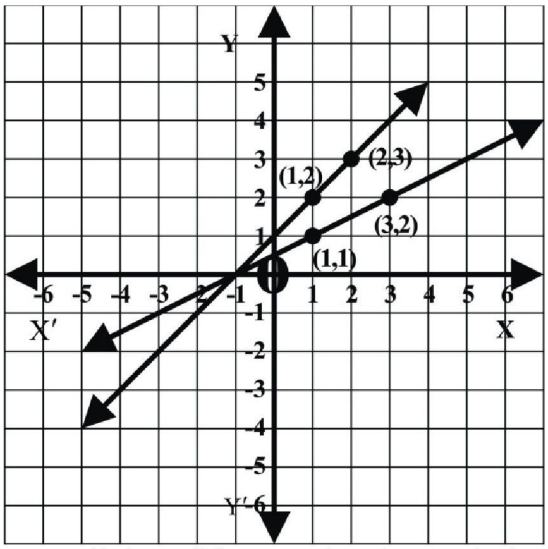
$\frac{x+1}{2}=y$

Or

$y=\frac{x+1}{2}$

x	$y=x+1$	(x,y)
1	1+1 = 2	(1,2)
2	2+1 = 3	(2,3)

x	$y=\frac{x+1}{2}$	(x,y)
1	$\frac{1+1}{2}=\frac{2}{2}=1$	(1,1)
3	$\frac{3+1}{2}=\frac{4}{2}=2$	(3,2)



Point of intersection is a solution set

Solution Set $=\{(-1,0)\}$

Q.3 $2x+y=0$

$x+2y=2$

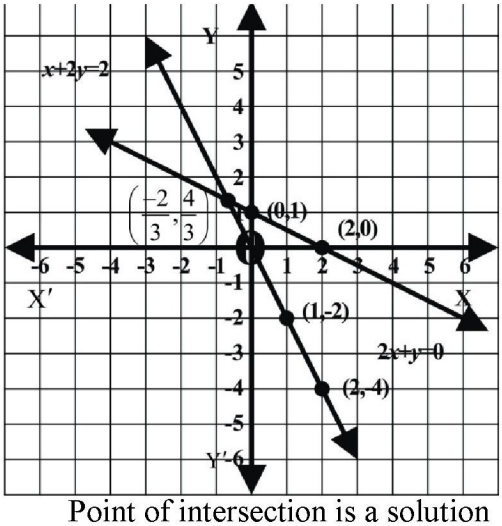
$y=-2x$

$2y=2-x$

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

x	$y=-2x$	(x,y)
1	$-2(1)=-2$	(1,-2)
2	$-2(2)=-4$	(2,-4)

x	$y=\frac{2-x}{2}$	(x,y)
0	$\frac{2-0}{2}=\frac{2}{2}=1$	(0,1)
2	$\frac{2-2}{2}=\frac{0}{2}=0$	(2,0)



Point of intersection is a solution

Solution Set $=\left(\frac{-2}{3},\frac{4}{3}\right)$

Q.4 $x+y-1=0$

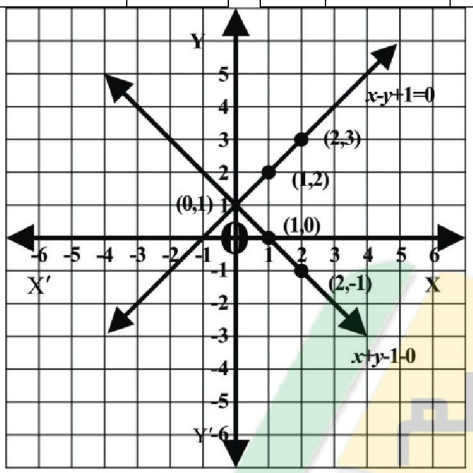
$x-y+1=0$

$y=1-x$

$x+1=y$ Or $y=x+1$

x	$y=1-x$	x,y
1	1–1= 0	(1,0)
2	1–2 = –1	(2,-1)

x	$y=x+1$	x,y
1	1+1 = 2	(1,2)
2	2+1 = 3	(2,3)



Point of intersection is a solution set

Solution Set $=\{(0,1)\}$

Q.5 $2x+y-1=0$

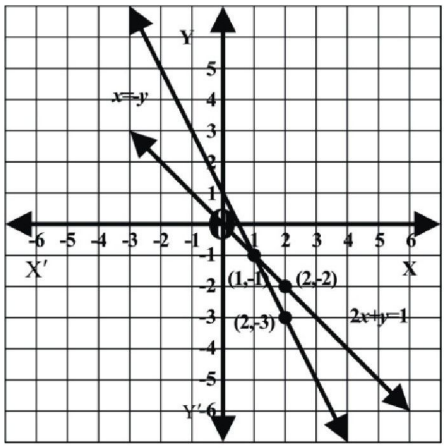
$x=-y$

$y=1-2x$

$y=-x$

x	$y=1-2x$	(x,y)
1	1–2(1)= –1	(1,-1)
2	1–2(2) = –3	(2,-3)

x	$y=-x$	(x,y)
1	–(1) = –1	(1,-1)
2	–(2) = –2	(2,-2)



Point of intersection is a solution set

Solution Set $=\{(1,-1)\}$

Last Updated: September 2020

Report any mistake at freeilm786@gmail.com