Pair of Linear Equations in Two varibles Ex 3.2 Q29

**Answer :**

**(i)**

The given equations are

$2x+y=6 \quad .....(i)$

$x-2y=-2 \quad .....(ii)$

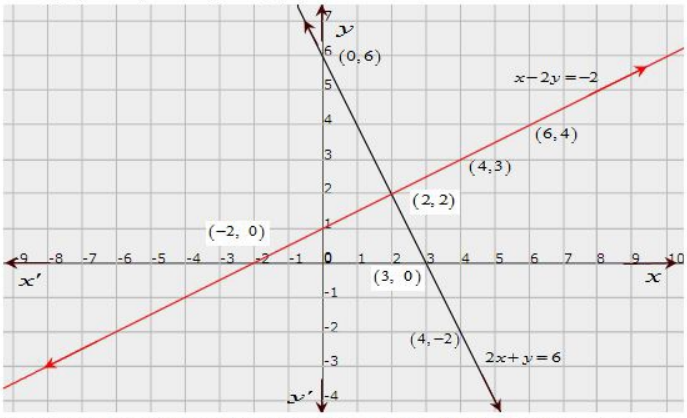
The two points satisfying (i) can be listed in a table as,

| $x$ | 4 | 0 |
|---|---|---|
| $y$ | -2 | 6 |

The two points satisfying (ii) can be listed in a table as,

| $x$ | 4 | 6 |
|---|---|---|
| $y$ | 3 | 4 |

Now, graph of equations (i) and (ii) can be drawn as,




It is seen that the solution of the given system of equations is given by $x=2, y=2$.

Also, it is observed that the coordinates of the points where the lines (i) and (ii) meet the $x$-axis are $(3,\ 0)$ and $(-2,\ 0)$ respectively.

**(ii)** The given equations are

$2x-y=2 \quad .....(i)$

$4x-y=8 \quad .....(ii)$

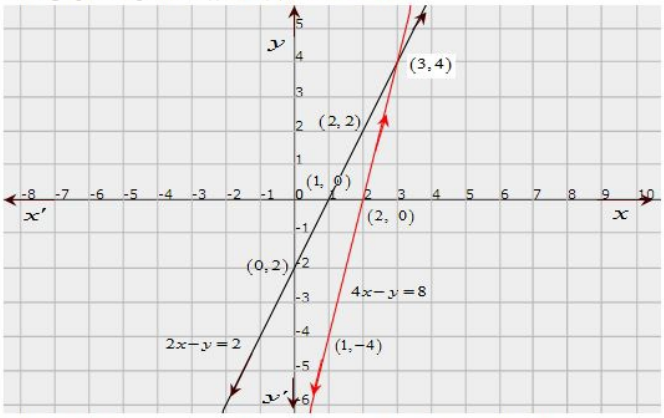
The two points satisfying (i) can be listed in a table as,

| $x$ | 0 | 2 |
|---|---|---|
| $y$ | 2 | 2 |

The two points satisfying (ii) can be listed in a table as,

| $x$ | 1 | 3 |
|---|---|---|
| $y$ | –4 | 4 |

Now, graph of equations (i) and (ii) can be drawn as,




It is seen that the solution of the given system of equations is given by $x = 3, y = 4$.

Also, it is observed that the coordinates of the points where the lines (i) and (ii) meet the $x$-axis are

$(1, 0)$ and $(2, 0)$ respectively.

**(iii)** The given equations are

$x + 2y = 5$ .....(i)

$2x - 3y = -4$ .....(ii)

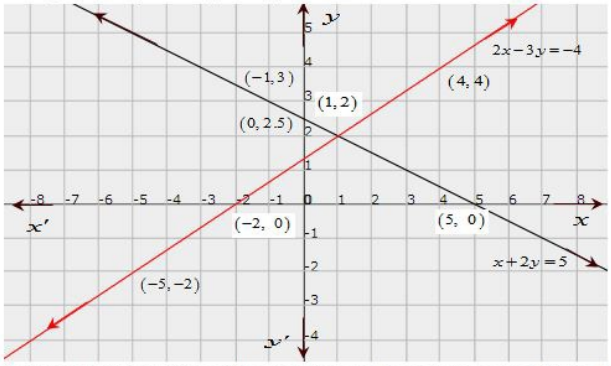
The two points satisfying (i) can be listed in a table as,

| $x$ | 0 | -1 |
|---|---|---|
| $y$ | 2.5 | 3 |

The two points satisfying (ii) can be listed in a table as,

| $x$ | 4 | –5 |
|---|---|---|
| $y$ | 4 | –2 |

Now, graph of equations (i) and (ii) can be drawn as,




It is seen that the solution of the given system of equations is given by $x = 1, y = 2$.

Also, it is observed that the coordinates of the points where the lines (i) and (ii) meet the $x$-axis are $(5, 0)$ and $(-2, 0)$ respectively.

**Solution is missing**

**(iv)** The given equations are

$2x + 3y = 8$ .....(i)

$x - 2y = -3$ .....(ii)

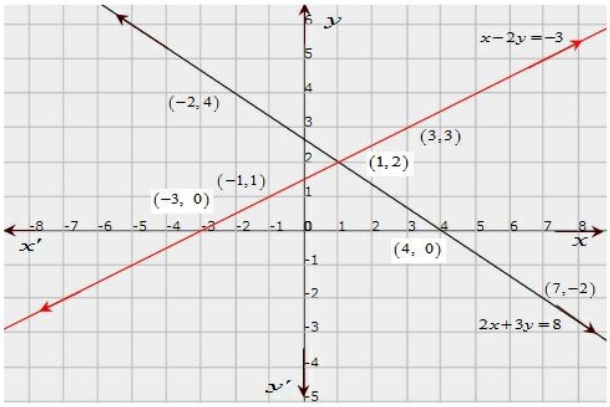
The two points satisfying (i) can be listed in a table as,

| $x$ | $-2$ | $7$ |
|---|---|---|
| $y$ | $4$ | $-2$ |

The two points satisfying (ii) can be listed in a table as,

| $x$ | $-1$ | $3$ |
|---|---|---|
| $y$ | $1$ | $3$ |

Now, graph of equations (i) and (ii) can be drawn as,




It is seen that the solution of the given system of equations is given by $x = 1, y = 2$.

Also, it is observed that the coordinates of the points where the lines (i) and (ii) meet the $x$-axis are $(4, 0)$ and $(-3, 0)$ respectively.

********** END **********