1. Draw the graph of each of the following linear equations in two variables:

(i) x+y = 4

Solution:

To draw a graph of linear equations in two variables, let us find out the points to plot.

To find out the points, we have to find the values which x and y can have, satisfying the equation.

Here,

x+y = 4

Substituting the values for x,

When x = 0,
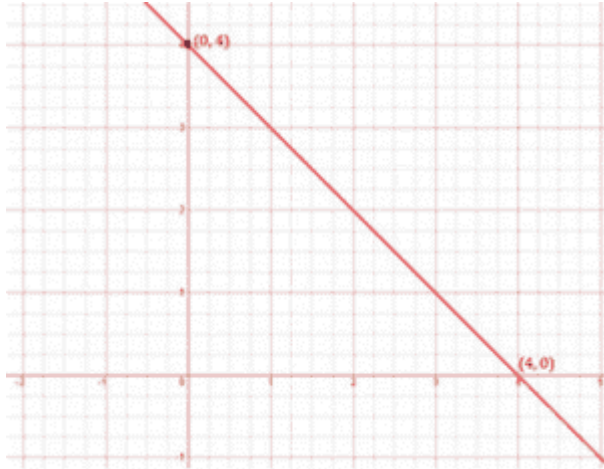
x+y = 4

0+y = 4

y = 4

When x = 4,

x+y = 4

4+y = 4

y = 4−4

y = 0

x	y
0	4

4	0

The points to be plotted are (0, 4) and (4,0)

(ii) x−y = 2

Solution:

To draw a graph of linear equations in two variables, let us find out the points to plot.

To find out the points, we have to find the values which x and y can have, satisfying the equation.

Here,

$x - y = 2$

Substituting the values for x,

When x = 0,

$x - y = 2$

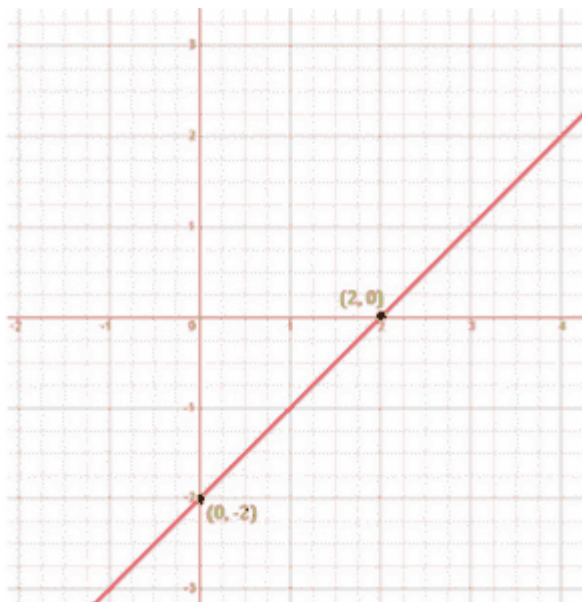$0 - y = 2$

$y = -2$

When x = 2,

$x - y = 2$

$2 - y = 2$

$-y = 2 - 2$

−y = 0

y = 0

x	y
0	− 2
2	0

The points to be plotted are (0, − 2) and (2, 0)

(iii) y=3x

Solution:

To draw a graph of linear equations in two variables, let us find out the points to plot.

To find out the points, we have to find the values which x and y can have, satisfying the equation.

Here,

y = 3x

Substituting the values for x,
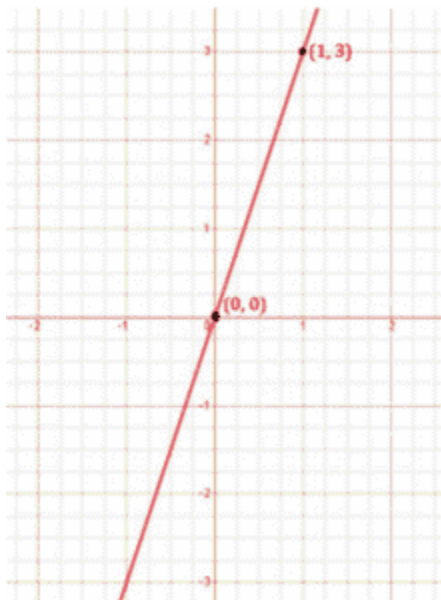
When x = 0,

y = 3x

y = 3×0

y = 0

When x = 1,

y = 3x

y = 3×1

y = 3

x	y
0	0
1	3

The points to be plotted are (0, 0) and (1, 3)

(iv) 3 = 2x+y

Solution:

To draw a graph of linear equations in two variables, let us find out the points to plot.

To find out the points, we have to find the values which x and y can have, satisfying the equation.

Here,

$3 = 2x+y$

Substituting the values for x,

When x = 0,

$3 = 2x+y$

$3 = 2×0+y$

$3 = 0+y$

$y = 3$

When x = 1,

$3 = 2x+y$

$3 = 2×1+y$

$3 = 2+y$

$y = 3−2$

$y = 1$

x	y
0	3
1	1

The points to be plotted are (0, 3) and (1, 1)