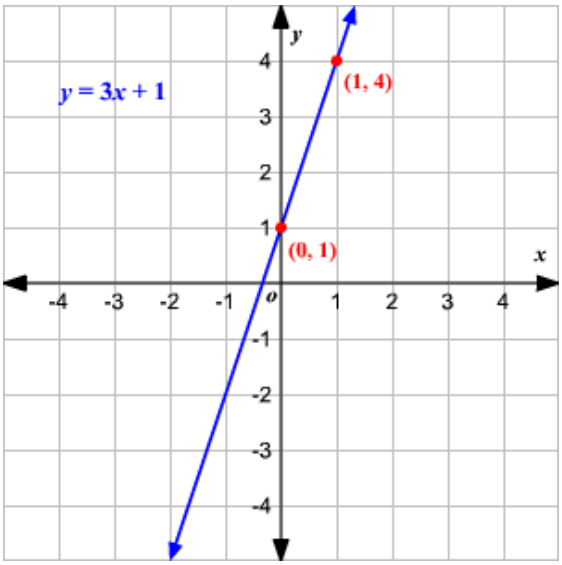
NCERT Class 9 Solutions: Linear Equation in Two Variable (Chapter 4) Exercise 4.3 – Part 1

Linear equation:



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

1. $x + y = 4$
2. $x - y = 2$
3. $y = 3x$
4. $3 = 2x + y$

Solution:

1. $x + y = 4$

So, $y = 4 - x$

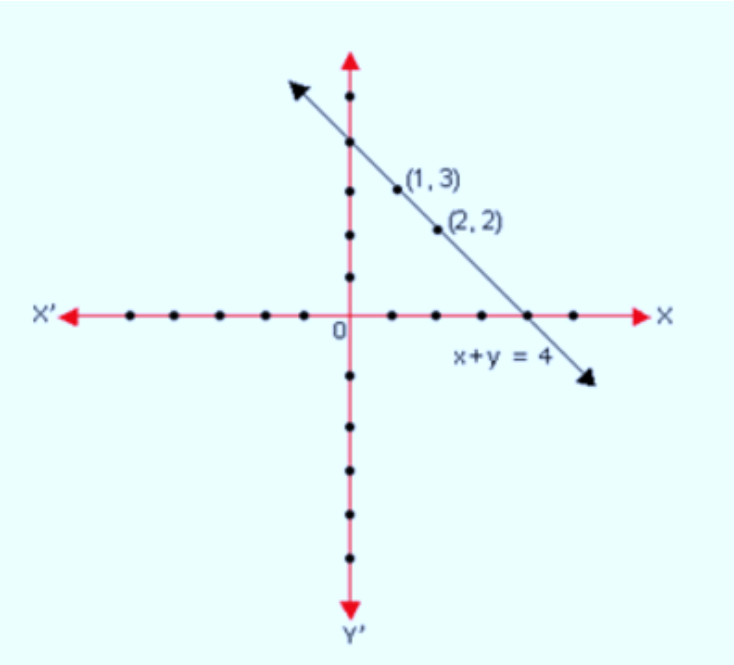
If $x = 1$ then $y = 4 - x = 4 - 1 = 3$

Point $(x, y) = (1, 3)$

If $x = 2$ then $y = 4 - x = 4 - 2 = 2$

Point $(x, y) = (2, 2)$

We plot the points $(1, 3)$ and $(2, 2)$ on the graph paper and join the same by a ruler to get the line which is the graph of the equation $x + y = 4$



1. $x - y = 2$

So, $y = x - 2$

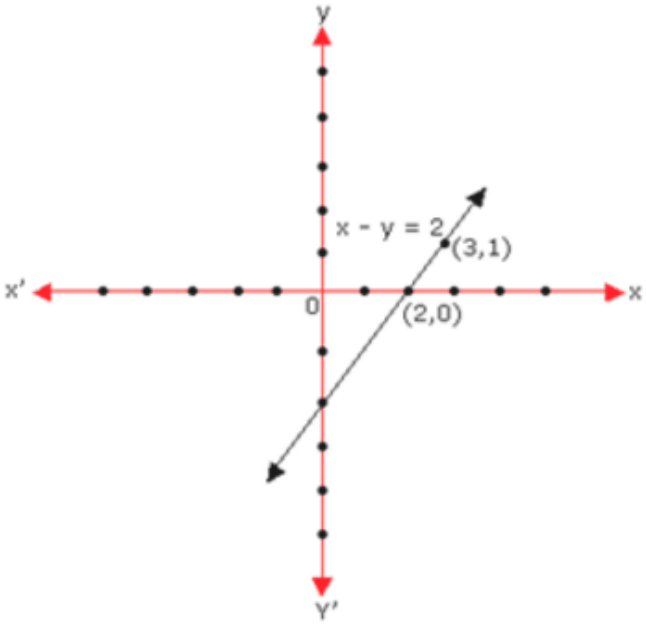
If $x = 2$ then $y = x - 2 = 2 - 2 = 0$

Point $(x, y) = (2, 0)$

If $x = 3$ then $y = x - 2 = 3 - 2 = 1$

Point $(x, y) = (3, 1)$

We plot the points $(2, 0)$ and $(3, 1)$ on the graph paper and join the same by a ruler to get the line which is the graph of the equation $x - y = 2$



1. $y = 3x$

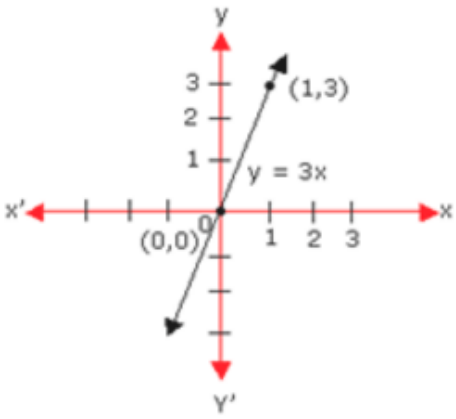
If $x = 0$ then $y = 3x = 3(0) = 0$

Point $(x, y) = (0, 0)$

If $x = 1$ then $y = 3x = 3 = 3$

Point $(x, y) = (1, 3)$

We plot the points $(0, 0)$ and $(1, 3)$ on the graph paper and join the same by a ruler to get the line which is the graph of the equation $y = 3x$



1. $3 = 2x + y$

So, $y = 3 - 2x$

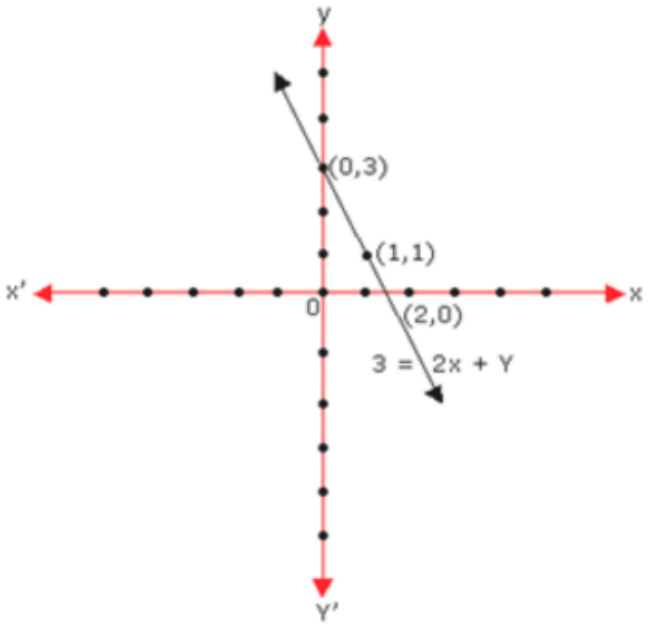
If $x = 1$ then $y = 3 - 2x = 3 - 2(1) = 1$

Point $(x, y) = (1, 1)$

If $x = 0$ then $y = 3 - 2x = 3$

Point $(x, y) = (1, 3)$

We plot the points $(1, 1)$ and $(1, 3)$ on the graph paper and join the same by a ruler to get the line which is the graph of the equation $3 = 2x + y$


y
(0,3)
(1,1)
x'
0
(2,0)
x
3 = 2x + Y
Y'