

Step-1

We have to solve by elimination the system of equations

$$x - y = 0$$

$$3x + 6y = 18$$

Also we have to draw a graph representing each equation as a straight line in the x - y plane; the lines intersect at the solution, also we have to add one more line “ the graph of the new second equation which arises after elimination.

Step-2

Given equations are

$$x - y = 0$$

$$3x + 6y = 18$$

Performing row 2 - 3 times of row 1 gives

$$x - y = 0$$

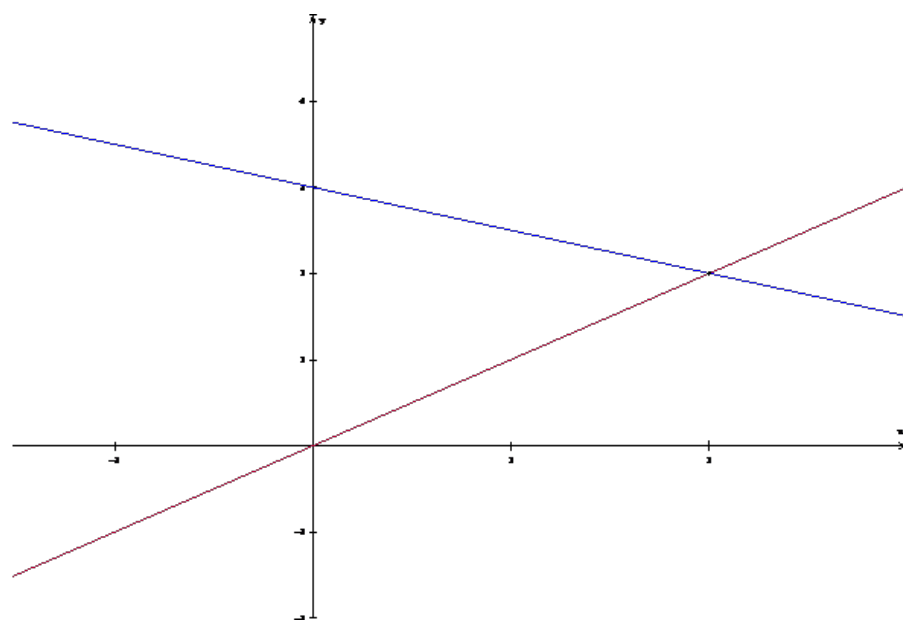
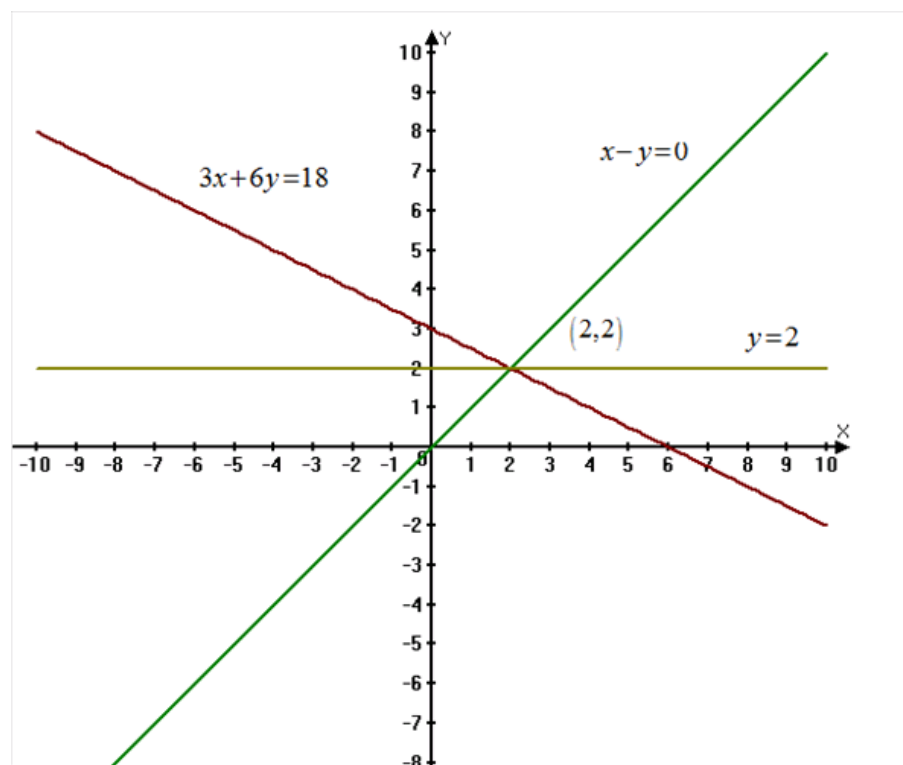
$$9y = 18$$

By back substitution gives $y = 2$ and $x = 2$

Hence the solution is $(2, 2)$

Step-3

The required graph is shown as follows:



The graph of the new second equation after elimination.

Step-4

