NCERT Solutions for Class 9 Maths Chapter 4 Linear Equations in Two Variables Ex 4.1

Question 1.

The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement.

(Take the cost of a notebook to be Rs x and that of a pen to be Rs. y)

Solution.

Let the cost of pen be y and the cost of notebook be x

As per the question,

Cost of a notebook = Twice the cost of pen = 2y

So, 2y = x

x – 2y = 0

This is a linear equation in two variables to represent this statement

Question 2.

Express the following linear equations in the form ax + by + c = 0 and indicate the values of a, b and c in each case:

(i) $2x + 3y = 9.3\bar{5}$

(ii) $x - \frac{y}{5} - 10 = 0$

(iii) –2x + 3y = 6

(iv) x = 3y

(v) 2x = –5y

(vi) 3x + 2 = 0

(vii) y – 2 = 0

(viii) 5 = 2x

Solution.

(i) 2x + 3y = 9.35

2x + 3y - 9.35 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 2x,

b = 3

and c = - 9.35

(ii) x – y/5 - 10 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 1,

b = $\frac{-1}{5}$

and c = - 10

(iii) -2x + 3y = 6

-2x + 3y – 6 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = -2,

b = 3

and c = -6

(iv) x = 3y

x – 3y = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 1,

b = -3

and c = 0

(v) 2x = -5y

2x + 5y = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 2,

b = 5

and c = 0

(vi) 3x + 2 = 0

3x + 0y + 2 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 3,

b = 0

And c = 2

(vii) y – 2 = 0

0x + y – 2 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = 0,

b = 1

And c = -2

(viii) 5 = 2x

-2x + 0y + 5 = 0

Now,

On comparing this equation with ax + by + c = 0

We get,

a = -2,

b = 0

And c = 5