

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) $2x + 3y = 9.35$

(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,

$$a = 2,$$

$$b = 3$$

$$\text{and } c = -9.35$$

(ii) $x - y/5 - 10 = 0$

Now,

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

We get,

$$a = 1,$$

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

$$\text{and } c = -10$$

(iii) $-2x + 3y = 6$

$$-2x + 3y - 6 = 0$$

Now,

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

We get,

$$a = -2,$$

$$b = 3$$

$$\text{and } c = -6$$

$$(iv) \ x = 3y$$

$$x - 3y = 0$$

Now,

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

We get,

$$a = 1,$$

$$b = -3$$

$$\text{and } c = 0$$

$$(v) \ 2x = -5y$$

$$2x + 5y = 0$$

Now,

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

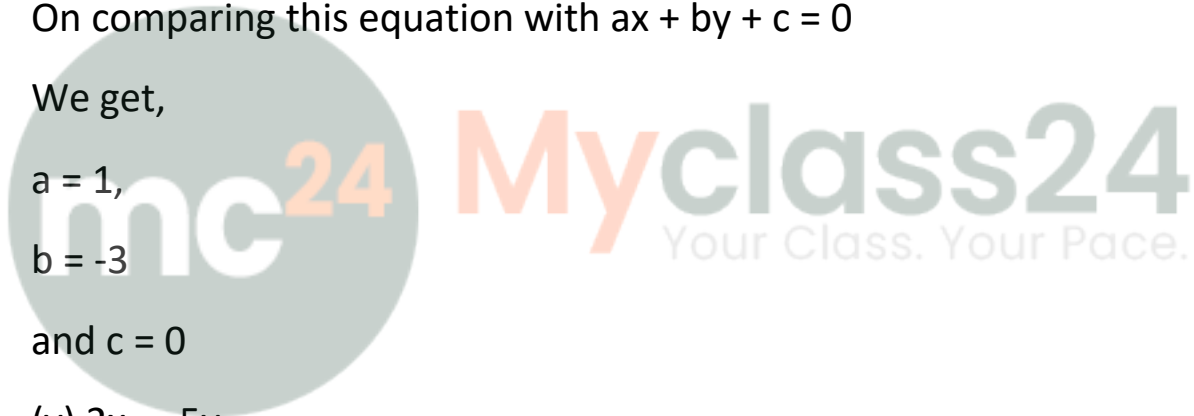
We get,

$$a = 2,$$

$$b = 5$$

$$\text{and } c = 0$$

$$(vi) \ 3x + 2 = 0$$



$$3x + 0y + 2 = 0$$

Now,

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

We get,

$$a = 3,$$

$$b = 0$$

$$\text{And } c = 2$$

$$\text{(vii) } y - 2 = 0$$

$$0x + y - 2 = 0$$

Now,

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

We get,

$$a = 0,$$

$$b = 1$$

$$\text{And } c = -2$$

$$\text{(viii) } 5 = 2x$$

$$-2x + 0y + 5 = 0$$

Now,

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

We get,

$$a = -2,$$

$$b = 0$$

$$\text{And } c = 5$$