

Ex - 4.1

Q1. The cost of notebook is twice the cost of a pen. Write a linear equation in two variable to represent this statement.

Sol. Let the cost of a pen be Rs. x and that of a notebook be Rs. y . We are given that $y = 2 \times x$ i.e., $y = 2x$. Hence, the required linear equation is $y = 2x$

Q2. Express the following linear equations in the form $ax + by + c = 0$ and indicate the values of a , b and c in each case :

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|----------------------|-------------------------|
| (i) $2x + 3y = 9.35$ | (ii) $x - y/5 - 10 = 0$ |
| (iii) $-2x + 3y = 6$ | (iv) $x = 3y$ |
| (v) $2x = -5y$ | (vi) $3x + 2 = 0$ |
| (vii) $y - 2 = 0$ | (viii) $5 = 2x$ |

Sol. (i) $2x + 3y - 9.35 = 0$
Here, $a = 2$, $b = 3$, $c = -9.35$

(ii) $x - y/5 - 10 = 0$
i.e., $1x + (-1/5)y + (-10) = 0$
Here, $a = 1$, $b = -1/5$, $c = -10$

(iii) $-2x + 3y = 6$
i.e., $2x - 3y + 6 = 0$,
i.e., $2x + (-3)y + 6 = 0$
Here, $a = 2$, $b = -3$, $c = 6$

(iv) $x = 3y$, i.e., $1x + (-3)y + 0 = 0$
Here, $a = 1$, $b = -3$, $c = 0$

(v) $2x = -5y$, i.e., $2x + 5y + 0 = 0$
Here, $a = 2$, $b = 5$, $c = 0$

(vi) $3x + 2 = 0$
i.e. $(3)x + (0)y + (2) = 0$
Here, $a = 3$, $b = 0$ and $c = 2$.

(vii) $y - 2 = 0$
i.e. $(0)x + (1)y + (-2) = 0$
Here, $a = 0$, $b = 1$ and $c = -2$.

(viii) $5 = 2x$
 $\Rightarrow 5 - 2x = 0$
 $\Rightarrow -2x + 0y + 5 = 0$
 $\Rightarrow (-2)x + (0)y + (5) = 0$
Here, $a = -2$, $b = 0$ and $c = 5$.