

# Mathematics

(www.tiwariacademy.net)

(Chapter – 2) (Polynomials)(Exemplar Problems)

(Class – IX)

## Exercise 2.3

### Question 10:

Verify whether the following are True or False:

(i)  $-3$  is a zero of  $x - 3$

(ii)  $-\frac{1}{3}$  is a zero of  $3x + 1$

(iii)  $-\frac{4}{5}$  is a zero of  $4 - 5y$

(iv)  $0$  and  $2$  are the zeroes of  $t^2 - 2t$

(v)  $-3$  is a zero of  $y^2 + y - 6$

### Answer 10:

(i) False

$$p(x) = x - 3$$

$$\Rightarrow p(-3) = -3 - 3 = -6 \neq 0$$

$\Rightarrow -3$  is not a zero of  $x - 3$ .

(ii) True

$$p(x) = 3x + 1$$

$$\Rightarrow p\left(-\frac{1}{3}\right) = 3\left(-\frac{1}{3}\right) + 1 = -1 + 1 = 0$$

$\Rightarrow -\frac{1}{3}$  is a zero of  $3x + 1$ .

(iii) False

$$p(y) = 4 - 5y$$

$$\Rightarrow p\left(-\frac{4}{5}\right) = 4 - 5\left(-\frac{4}{5}\right) = 4 + 4 = 8 \neq 0$$

$\Rightarrow -\frac{4}{5}$  is not a zero of  $4 - 5y$ .

(iv) True

$$p(t) = t^2 - 2t$$

$$\Rightarrow p(0) = (0)^2 - 2(0) = 0 - 0 = 0$$

$\Rightarrow 0$  is a zero of  $t^2 - 2t$ .



# Mathematics

([www.tiwariacademy.net](http://www.tiwariacademy.net))

*(Chapter – 2) (Polynomials)(Exemplar Problems)*

**(Class – IX)**

And  $p(2) = (2)^2 - 2(2) = 4 - 4 = 0$

$\Rightarrow$  2 is a zero of  $t^2 - 2t$ .

(v) **True**

$$p(y) = y^2 + y - 6$$

$$\Rightarrow p(-3) = (-3)^2 + (-3) - 6 = 9 - 3 - 6 = 0$$

$\Rightarrow$  -3 is a zero of  $y^2 + y - 6$ .

