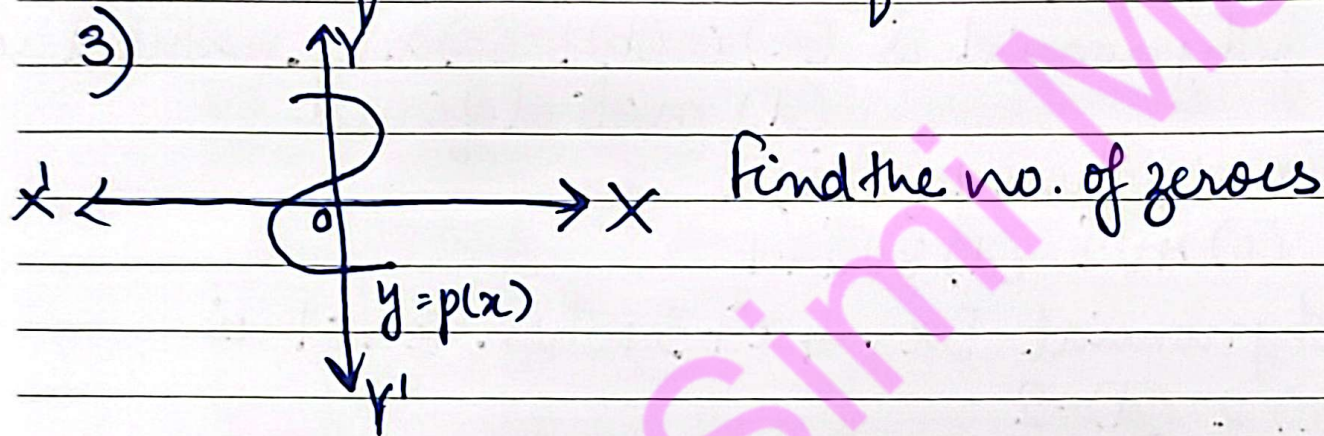


Test-2

1) For what value of k , 3 is a zero of the polynomial $2x^2 + x + k$?

2) If 2 is a zero of polynomial $f(x) = ax^2 - 3(a-1)x - 1$, then find the value of a .



4) Find the degree of the polynomial $\frac{-t^9 + 4t^6 + 7t^5}{t^5}$

5) Write the degree of (i) zero polynomial
(ii) constant polynomial.

Test-2 (Answers)

1) let $p(x) = 2x^2 + x + k$

Since 3 is a zero of $p(x)$, $p(3) = 0$

$$\Rightarrow 2 \times 9 + 3 + k = 0$$

$$\Rightarrow 21 + k = 0$$

$$\underline{k = -21}$$

2) Since 2 is a zero of $f(x)$, then $\underline{k = -21}$

$$f(2) = 0$$

$$\Rightarrow a \times 4 - 3(a-1) \times 2 - 1 = 0$$

$$\Rightarrow 4a - 6(a-1) - 1 = 0$$

$$\Rightarrow 4a - 6a + 6 - 1 = 0$$

$$\Rightarrow -2a + 5 = 0$$

$$-2a = -5$$

$$a = \frac{5}{2}$$

$$\underline{\underline{\frac{5}{2}}}$$

3) Since the graph $y = p(x)$ intersects the x -axis at only one point, the no. of zeroes = 1

$$\begin{aligned} 4) \frac{-t^9 + 4t^6 + 7t^5}{t^5} &= \frac{-t^9}{t^5} + \frac{4t^6}{t^5} + \frac{7t^5}{t^5} \\ &= -t^{9-5} + 4t^{6-5} + 7t^{5-5} \\ &= -t^4 + 4t + 7t^0 \end{aligned}$$

$\therefore$ degree is 4

5) (i) degree of zero polynomial is not defined

(ii) degree of constant polynomial is 0.
