

Mathematics

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

(Class – X)

Exercise 2.1

Choose the correct answer from the given four options in the following question:

Question 1:

If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is -3 , then the value of k is

(A) $\frac{4}{3}$

(B) $-\frac{4}{3}$

(C) $\frac{2}{3}$

(D) $-\frac{2}{3}$

Answer 1:

(A) $\frac{4}{3}$

Solution:

Given that, one of the zeroes of the quadratic polynomial $p(x) = (k - 1)x^2 + kx + 1$ is -3 , then $p(-3) = 0$

$$\Rightarrow (k - 1)(-3)^2 + k(-3) + 1 = 0$$

$$\Rightarrow 9(k - 1) - 3k + 1 = 0$$

$$\Rightarrow 9k - 9 - 3k + 1 = 0$$

$$\Rightarrow 6k - 8 = 0$$

$$\therefore k = \frac{4}{3}$$

