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 $p(-3) = 0$

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

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

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

$\Rightarrow 6k - 8 = 0$

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