

Mathematics

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

(Class – IX)

Exercise 2.1

Write the correct answer in each of the following:

Question 10:

One of the zeroes of the polynomial $2x^2 + 7x - 4$ is

(A) 2 (B) $\frac{1}{2}$ (C) $-\frac{1}{2}$ (A) -2

Answer 10:

(B) $\frac{1}{2}$

Solution:

Given polynomial: $p(x) = 2x^2 + 7x - 4$

For zeroes, $p(x) = 0$

$$\Rightarrow 2x^2 + 7x - 4 = 0$$

$$\Rightarrow 2x^2 + 8x - x - 4 = 0$$

$$\Rightarrow 2x(x + 4) - 1(x + 4) = 0$$

$$\Rightarrow (x + 4)(2x - 1) = 0$$

$$\Rightarrow x + 4 = 0 \quad \text{or} \quad 2x - 1 = 0$$

$$\Rightarrow x = -4 \quad \text{or} \quad x = \frac{1}{2}$$

$\Rightarrow x = \frac{1}{2}$ is one of the zeroes of the given polynomial.

Hence, the option (B) is correct.

