

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 12:

If $x + 1$ is a factor of the polynomial $2x^2 + kx$, then the value of k is

(A) -3 (B) 4 (C) 2 (D) -2

Answer 12:

(C) 2

Solution:

Given polynomial: $p(x) = 2x^2 + kx$

According to factor theorem, if $p(x) = 2x^2 + kx$ is divided by $x + 1$, the remainder is 0.

$$\Rightarrow p(-1) = 0$$

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

$$\Rightarrow 2 - k = 0$$

$$\Rightarrow k = 2$$



Hence, the option (C) is correct.

