

Mathematics

(www.tiwariacademy.net)

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

(Class – IX)

Exercise 2.1

Write the correct answer in each of the following:

Question 18:

The coefficient of x in the expansion of $(x + 3)^3$ is

- (A) 1 (B) 9 (C) 18 (D) 27

Answer 18:

(D) 27

Solution:

Given Polynomial: $(x + 3)^3$

$$= x^3 + 3^3 + 3x^2(3) + 3x(3)^2 \quad [\because (a + b)^3 = (a^3 + b^3 + 3a^2b + 3ab^2)]$$

$$= x^3 + 27 + 9x^2 + 27x$$

\Rightarrow The coefficient of x in the expansion $(x + 3)^3$ is 27.

Hence, the option (D) is correct.

