

Mathematics

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

(Class – IX)

Exercise 2.3

Question 7:

Find the value of the polynomial $3x^3 - 4x^2 + 7x - 5$, when $x = 3$ and also when $x = -3$.

Answer 7:

$$\text{Let } p(x) = 3x^3 - 4x^2 + 7x - 5$$

So, the value of $3x^3 - 4x^2 + 7x - 5$, when $x = 3$ is given by

$$\begin{aligned} p(3) &= 3(3)^3 - 4(3)^2 + 7(3) - 5 \\ &= 81 - 36 + 21 - 5 \\ &= 102 - 41 \\ &= 61 \end{aligned}$$

The value of $3x^3 - 4x^2 + 7x - 5$, when $x = -3$ is given by

$$\begin{aligned} p(-3) &= 3(-3)^3 - 4(-3)^2 + 7(-3) - 5 \\ &= -81 - 36 - 21 - 5 \\ &= -143 \end{aligned}$$

