

Mathematics

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

(Class – IX)

Exercise 2.2

Question 2:

Write whether the following statements are **True** or **False**. Justify your answer.

- (i) A binomial can have atmost two terms
- (ii) Every polynomial is a binomial
- (iii) A binomial may have degree 5
- (iv) Zero of a polynomial is always 0
- (v) A polynomial cannot have more than one zero
- (vi) The degree of the sum of two polynomials each of degree 5 is always 5.

Answer 2:

- (i) **False**

Because a binomial has exactly two terms.

- (ii) **False**

Because a polynomial can be monomial, binomial, trinomial, etc.

For example:

$x^5 + x + 1$ is a polynomial but not a binomial.

- (iii) **True**

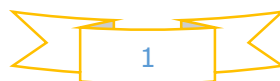
Because the degree of a polynomial is a whole number. So, degree can be 5 also.

- (iv) **False**

Because zero of a polynomial can be any real number.

- (v) **False**

A polynomial can have any number of zeroes. It depends upon the degree of the polynomial.



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(vi) False

It may be less than or equal to 5.

For example:

Case: I

$x^5 + 1$ and $-x^5 + 2x^2 + 3$ are two polynomials of degree 5 but the degree of the sum of the two polynomials is 2.

Case: II

$x^5 + 1$ and $x^5 + 2x^2 + 3$ are two polynomials of degree 5 but the degree of the sum of the two polynomials is 5.

