**CBSE Class–10 Mathematics  
Revision Notes  
CHAPTER 02  
POLYNOMIALS**

1. Geometrical Meaning of the Zeroes of a Polynomial
2. Zeroes and Coefficients of a Polynomial
3. Division Algorithm for Polynomials
4. **Monomials**: Algebraic expression with one term is known as Monomial.
5. **Binomial**: Algebraic expression with two terms is called Binomial.
6. **Trinomial**: Algebraic expression with three terms is known as Trinomial.
7. **Polynomials**: All above mentioned algebraic expressions are called Polynomials.
8. Polynomials of degrees 1, 2 and 3 are called linear, quadratic and cubic polynomials respectively.
9. A quadratic polynomial in x with real coefficient is of the form https://elpiscart.com/cgi-bin/mathtex.cgi?%7b\text%7ba%7d%7d%7b%7b\text%7bx%7d%7d%5e2%7d%7b\text%7b%20%7d%7d%20+%20%7b\text%7b%20bx%20%7d%7d%20+%20%7b\text%7b%20c%7d%7d,where a, b, c are real numbers with https://elpiscart.com/cgi-bin/mathtex.cgi?%7b\text%7ba%20%7d%7d%20\ne%200.
10. The zeroes of a polynomial p(x) are precisely the x–coordinates of the points where the graph of y = p(x) intersects the x-axis i.e. x = a is a zero of polynomial p(x) if p(a) = 0.
11. A polynomial can have at most the same number of zeros as the degree of polynomial.
12. For quadratic polynomial https://elpiscart.com/cgi-bin/mathtex.cgi?%7b\text%7ba%7d%7d%7b%7b\text%7bx%7d%7d%5e2%7d%20+%20%7b\text%7b%20bx%20%7d%7d%20+%20%7b\text%7b%20c%7d%7dhttps://elpiscart.com/cgi-bin/mathtex.cgi?(a%20\ne%200)

Sum of zeroes =https://elpiscart.com/cgi-bin/mathtex.cgi?\;%20-%20\frac%7bb%7d%7ba%7d

Product of zeroes = https://elpiscart.com/cgi-bin/mathtex.cgi?\;\frac%7bc%7d%7ba%7d

10. In a cubic polynomial https://elpiscart.com/cgi-bin/mathtex.cgi?a%7bx%5e3%7d%20+%20b%7bx%5e2%7d%20+%20cx%20+%20d, if https://elpiscart.com/cgi-bin/mathtex.cgi?\alpha%20,\beta%20,\gamma are the zeroes of the polynomial, then

https://elpiscart.com/cgi-bin/mathtex.cgi?\alpha%20+%20\beta%20+%20\gamma%20=%20%7b%7b%20-%20b%7d%20\over%20a%7d

https://elpiscart.com/cgi-bin/mathtex.cgi?\alpha%20\beta%20+%20\beta%20\gamma%20+%20\gamma%20\alpha%20=%20%7bc%20\over%20a%7d

https://elpiscart.com/cgi-bin/mathtex.cgi?\alpha%20.\beta%20.\gamma%20=%20%7bd%20\over%20a%7d

11. The division algorithm states that given any polynomial p(x) and polynomial g(x), there are polynomials q(x) and r(x) such that :

where r(x) = 0 or degree of r(x) < degree of g(x).

Or          Dividend = Divisor x Quotient + Remainder

If r(x) = a zero polynomial, then p(x) is said to be completely divisible by g(x), i.e., g(x) is a factor of p(x).