

CBSE TEST PAPER-05

MATHEMATICS (Class-10)

Chapter 2. Polynomials

(Questions 1marks)

- Q1. The value of quadratic polynomial $f(x) = 2x^2 - 3x - 2$ at $x = -2$ is
- Q2. If the product of zeros of the polynomial $x^2 - 6x - 6$ is 4. Find the value of a.
- Q3. Find the zeroes of the polynomial $x^2 - 1$.
- Q4. The sum and product of the zeroes of a quadratic polynomial are $-\frac{1}{2}$ and -3 respectively.
What is the quadratic polynomial?
- Q5. Write a polynomial whose zeroes are $\sqrt{2}$ and $\sqrt{-2}$.
- Q6. Find the zeroes of the polynomial
- Q7. $2x^2 - 3x + 5$ is a polynomial true or false justify.
- Q8. What is the zeroes of the polynomial $ax - b = 0$, $a + b$.
- Q9. Give examples of polynomials $f(x)$, $g(x)$ and $r(x)$ which $q(x) + r(x)$ and (i) $\deg r(x) = 0$ (ii) $\deg f(x) = \deg g(x) = 2$ (iii) $\deg q(x) = \deg r(x) = 1$.

(Questions 2/3 marks)

- Q1. Obtain all the zeroes of the polynomial $x^2 + 7x + 10$ any verify the relationship between the zeroes and its coefficients.
- Q2. If two zeroes of the polynomial of $(x) = x^2 - 3x - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$ find other zeroes.
- Q3. If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - 2x + 1$, then find $1/\alpha$ and $1/\beta$
- Q4. If α and β are the zeroes of the polynomial $f(x) = x^2 - px + q$ such that $\alpha^2 + \beta^2$
- Q5. If α and β are the zeroes of the polynomial $f(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$. Find value of k
- Q6. Check whither $2x^3 + 1$ is a factor of $2x^5 + 0x^4 + 6x^3 + 2x^2 + 5x + 1$.
- Q7. Obtain all the zeroes of the polynomial $f(x) = 3x^4 + 6x^3 + 2x^2 + 10x + 5$ if two of its zeroes are $-\frac{\sqrt{5}}{3}$ and $\frac{\sqrt{5}}{3}$
- Q8. If the polynomial $f(x) = x^4 + 6x^3 + 16x^2 - 25x - 10$ is divided by another polynomial $x^2 - 2x - k$, the remainder comes out to be $x + a$, find k and a
- Q9. Find the polynomial of least degree which should be subtracted from the polynomial $x^4 + 2x^3 - 4x^2 + 6x - 3$ so that it is exactly divisible by $x^2 - x + 1$.
- Q10. Divided $3x^2 - x^3 - 3x = 5$ by $x - 1 - x^2$ and verify the division algorithm.