

Class 10 Maths POLYNOMIALS IMPORTANT Previous year questions :

Q.1 If one zero of the polynomial $p(x) = 6x^2 + 37x - (k-2)$ is reciprocal of the other then find the value of k. **CBSE 2023**

Answer: -4

Q.2 Find the value of 'a' if $x + a$ is a factor (zero) of a polynomial $2x^2 + 2ax + 5x + 10$. **CBSE 2016**

Answer: 2

Q.3 Find the zeros of the quadratic polynomial $x^2 + 7x + 10$ and verify the relationship between zeros and the coefficients. **CBSE 2020 Basic**

Answer: - 5 and -2

Q.4 If α and β are zeroes of the polynomial $x^2 - p(x + 1) + c$ such that $(\alpha + 1)(\beta + 1) = 0$, then find the value of c. **CBSE 2015**

Answer: - 1

Q.5 If α and β are zeroes of the polynomial $f(x) = 5x^2 - 7x + 1$, then find the value of $\alpha/\beta + \beta/\alpha$. **CBSE 2020 Basic**

Answer: 39/5

Q.6 find the value of k such that the polynomial $x^2 - (k + 6)x + 2(2k - 1)$ has sum of its zeroes equal to half of their product. **CBSE 2019**

Answer: 7

Q.7 Find the quadratic polynomial, the sum and product of whose zeroes are -3 and 2 respectively. **CBSE 2020 Basic**

Answer: $x^2 + 3x + 2$

Q.8 find a quadratic polynomial whose zeroes are reciprocals of the zeros of the polynomial $f(x) = ax^2 + bx + c$. **CBSE 2020 standard**

Answer: $x^2 + bx/c + a/c$

Q.9 If α and β are zeroes of the polynomial $x^2 - 5$, then form a quadratic polynomial whose zeroes are $1 + \alpha$ and $1 + \beta$. **CBSE 2020 Basic**

Answer: $x^2 - 2x - 24$

Q.10 If zeroes α and β of a polynomial $x^2 - 7x + k$ are such that $\alpha - \beta = 1$, then find the value of k . **CBSE 2015**

Answer: 12

Q.11 If α and β are zeroes of the polynomial $2y^2 + 7y + 5$, then find the value of $\alpha + \beta + \alpha\beta$. **CBSE 2010**

Answer: -1

Q.12 If α and β are zeroes of the polynomial $4x^2 + 3x + 7$, then find the value of $1/\alpha + 1/\beta$. **CBSE 2014**

Answer: $-3/7$

Q.13 If one zero of the polynomial $3x^2 - 8x + 2k + 1$ is 7 times the other, then find the zeroes and the value of k . **CBSE 2010**

Answer: $k = \frac{2}{3}$

Q.14 Find the quadratic polynomial, the sum and the product of whose zeroes are 0 and $-\sqrt{2}$. **CBSE 2015**

Answer: $x^2 - \sqrt{2}$

Q.15 If sum and product of zeroes of quadratic polynomial are respectively 8 and 12, then find their zeroes. **CBSE 2008**

Answer: 2, 6

Q.16 Find the quadratic polynomial, whose zeroes are 2 and -6. verify the relationship between zeroes and the coefficients. **CBSE 2010**

Answer: $x^2 + 4x - 12$

Q.17 If α and β are zeroes of the polynomial $f(x) = x^2 + x - 2$, then find a polynomial whose zeroes are $2\alpha + 1$ and $2\beta + 1$. **CBSE 2015**

Answer: $x^2 - 9$

Q.18 Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship between zeros and the coefficients. **CBSE 2020 Basic**

Answer: $-1/3$ and $3/2$

Q.19 For what value of k , -2 is a zero of the polynomial $3x^2 + 4x + 2k$?
CBSE 2010

Answer: -2

Q.20 If one zero of $2x^2 - 3x + k$ is reciprocal to the other, then find the value of k . **CBSE 2010**

Answer: 2

Q.21 If one zero of $(a^2 + 9)x^2 + 13x + 6a$ is reciprocal to the other, then find the value of a . **CBSE 2008, 15**

Answer: 3

Q.22 If α and β are zeroes of the polynomial $p(x) = x^2 - (k + 6)x + 2(2k - 1)$, then find the value of $\alpha + \beta = \alpha\beta/2$. **CBSE 2011**

Answer: 7

Q.23 If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of $2x^2 - 5x - 3$, then find the value of p and q . **CBSE 2012**

Answer: $p = 5$, $q = -6$

Q.24 Find the zeros of the quadratic polynomial $4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ by factorisation method and verify the relationship between zeroes and the coefficients. **CBSE 2011**

Answer: $-2/\sqrt{3}$ and $3/4\sqrt{3}/2$

Q.25 If $(x + a)$ is a factor of two polynomials $x^2 + px + q$ and $x^2 + mx + n$, then prove that $a = (n - q)/(m - p)$. **CBSE 2011**

Q.26 If the sum of the zeroes of the polynomial $p(x) = (a + 1)x^2 + (2a + 3)x + (3a + 4)$ is -1 , then find the product of its zeroes. **CBSE 2012**

Answer: -2