



VIDYA BHAWAN, BALIKA VIDYAPITH

Shakti Utthan Ashram, Lakhisarai-811311(Bihar)

(Affiliated to CBSE up to +2 Level)

Class10th

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Sub.: Mathematics

Q13 : If one of the zeroes of the polynomial $5z^2 + 13z - p$ is the reciprocal of the other, find p .

Q14 : On dividing the polynomial $4x^4 - 3x^3 - 42x^2 - 55x - 17$ by the polynomial $g(x)$ the quotient is $x^2 - 3x - 5$ and the remainder is $5x + 8$. Find $g(x)$.

Q15 : If $\frac{1}{2}$ and 1 are zeroes of $2x^4 - 3x^3 - 3x^2 + 6x - 2$, find the other zeroes.

Q16 : Verify that 1, -2 and $\frac{1}{2}$ are zeroes of $2x^3 + x^2 - 5x + 2$. Also verify the relationship between the zeroes and the coefficients.

Q17 : If α and β are the zeroes of quadratic polynomial $x^2 - kx + 15$ such that $(\alpha + \beta)^2 - 2\alpha\beta = 34$, find k .

Q18 : If one zero of polynomial $2x^2 - 3x + p$ is 3, then find the other root(zero). Also find the value of p .

Q19 : If one zero of polynomial $2x^2 + px + 4$ is 2, find the other zero. Also find p .

Q20 : If α and β are the zeroes of the quadratic polynomial $ax^2 + bx + c$, find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$.

Q21 : If one zero of the polynomial $(a^2 + 9)x^2 + 13x + 6a$ is the reciprocal of the other, find a .

Q22 : If α and β are the zeroes of $2x^2 - 9x + 10$, form the polynomial whose zeroes are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$.

Q23 : Divide $2x^2 + 4x^3 + 5x - 6$ by $2x^2 + 1 + 3x$ and verify the division algorithm.

Q24 : The curve which represents a quadratic polynomial meets the x axis at $(2, 0)$ and $(-2, 0)$. Form the quadratic polynomial.

Q25 : What must be subtracted from $8x^4 + 14x^3 - 2x^2 + 7x - 8$, so that the difference is exactly divisible by $4x^2 + 3x - 2$?

Q26 : Find the values of a and b such that $x^4 + x^3 + 8x^2 + ax + b$ is exactly divisible by $x^2 + 1$?

Q27 : If the polynomial $P(x) = x^4 - 6x^3 + 16x^2 - 25x + 10$ divided by $x^2 - 2x + k$, the remainder is $x + a$. Find k and a .

Q28 : The zeroes of $x^2 - kx + 6$ are in the ratio 3: 2, find k .