

Grade: 10

Mode: Online

Subjects: MATH

POLYNOMIALS – REVISION WORKSHET -1

1. If the sum of zeroes of the quadratic polynomial $3x^2 - kx + 6$ is 3, then find the value of k .
2. If the sum of the zeroes of the polynomial $p(x) = (k^2 - 14)x^2 - 2x - 12$ is 1, then find the value of k .
3. Form a quadratic polynomial whose zeroes are $3 + \sqrt{2}$ and $3 - \sqrt{2}$.
4. Find a quadratic polynomial, the sum and product of whose zeroes are 0 and $-\sqrt{2}$ respectively.
5. Find the zeroes of the quadratic polynomial $\sqrt{3}x^2 - 8x + 4\sqrt{3}$.
6. If α and β are the zeroes of the polynomial $6y^2 - 7y + 2$, find a quadratic polynomial whose zeroes are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$.
7. If α and β are zeroes of $p(x) = kx^2 + 4x + 4$, such that $\alpha^2 + \beta^2 = 24$, find k .
8. If α and β are the zeroes of the polynomial $p(x) = 2x^2 + 5x + k$, satisfying the relation $\alpha^2 + \beta^2 + \alpha\beta = \frac{21}{4}$, then find the value of k .
9. If α and β are the zeroes of the polynomial $ax^2 + bx + c$, find the value of $\alpha^2 + \beta^2$.
10. Find the condition that zeroes of polynomial $p(x) = ax^2 + bx + c$ are reciprocal of each other.
11. If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of $2x^2 - 5x - 3$, find the value of p and q .
12. Find a quadratic polynomial whose zeroes are $\frac{3+\sqrt{5}}{5}$ and $\frac{3-\sqrt{5}}{5}$.
13. α and β are zeroes of the quadratic polynomial $x^2 - 6x + y$. Find the value of y if $3\alpha + 2\beta = 20$.
14. Find a quadratic polynomial whose zeroes are reciprocals of the zeroes of the polynomial $f(x) = ax^2 + bx + c$, where $a \neq 0, c \neq 0$.