

1. Find a quadratic polynomial, the sum and product of whose zeroes are 0 and $\sqrt{5}$ respectively.
2. Find the quadratic polynomial, the sum and product of whose zeroes are 4 and 1, respectively
3. If a and b are the zeros of the quadratic polynomial $f(x) = x^2 - 5x + 4$, find the value of $\frac{1}{a} + \frac{1}{b} - \frac{2}{ab}$
4. Find the zeroes of the quadratic polynomial $4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ and verify the relationship between the zeroes and the coefficients.
5. Find the zeroes of the quadratic polynomial $4u^2 + 8u$ and verify the relationship between the zeroes and the coefficients
6. Find the quadratic polynomial, the sum and product of whose zeroes are $\sqrt{2}$ and 3 respectively.
7. If a and b are the zeros of the given quadratic polynomial $f(x) = 5x^2 - 7x + 1$, find the value $\frac{1}{a} + \frac{1}{b}$
8. Find the zeroes of the polynomial $x^2 - 3$ and verify the relationship between the zeroes and the Coefficients
9. Find the remainder when $p(x) = x^3 - 6x^2 + 2x - 4$ when divided by $1 - 2x$.
10. Find the remainder when $x^{51} + 51$ is divided by $(x+1)$.
11. Find all the integral zeros of $x^3 - 3x^2 - 2x + 6$
12. Obtain all zeros of $3x^4 + 6x^3 - 2x^2 - 10x - 5$, if two of its zeros are $\sqrt{5}/\sqrt{3}$ and $-\sqrt{5}/\sqrt{3}$
13. If $(x - 2)$ and $[x - \frac{1}{2}]$ are the factors of the polynomials $qx^2 + 5x + r$ prove that $q = r$
14. If the zeroes of the polynomial $3x^2 - 5x + 2$ are $a + b$ and $a - b$, find a and b.
15. On dividing $2x^2 + 3x + 1$ by a polynomial $g(x)$, the quotient and the remainder were $2x - 1$ and 3 respectively. Find $g(x)$.