

St. Andrews Scots Sr. Sec. School

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Session:2026-27

Worksheet

Class: X	Subject: Mathematics	Topic: Polynomial	Worksheet 2
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1. If one of the zeroes of the quadratic polynomial $(k-1)x^2 + kx + 1$ is (-3) , then find the value of k
2. The sum of the zeroes of the quadratic polynomial $3x^2 - kx + 6$ is 3, then find the value of k .
3. Find the quadratic polynomial whose zeroes are $\sqrt{2}$ and $2\sqrt{2}$.
4. If zeroes of the polynomial $x^2 + 4x + 2a$ are α and 2α , then the value of a is
5. If p and q are the zeroes of the polynomial $p(x) = 2x^2 - 7x + 3$, then the value of $p^2 + q^2$ is.
6. If α and β are the zeroes of the polynomial $f(x) = 2x^2 - 4x + 5$ then find the value of $\alpha^2 + \beta^2$.
7. If α, β are the zeroes of the polynomial $f(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$, find the value of k .
8. If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - p(x+1) - c$, show that $(\alpha + 1)(\beta + 1) = 1 - c$
9. Find the value of ' k ' such that the quadratic polynomial $x^2 - (k+6)x + 2(2k+1)$ has sum of the zeros is half of their product
10. Find the zeros of the polynomial $p(x) = 4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ and verify the relationship between the zeros and its coefficients
11. Find the value of ' k ' so that the zeroes of the quadratic polynomial $3x^2 - kx + 14$ are in the ratio 7:6.
12. If the Zeroes of the Quadratic Polynomial $6x^2 - 3 - 7x$ are α and β then find the quadratic polynomial whose zeroes are $\alpha\beta$ and $\beta\alpha$
13. If α , and β are the zeroes of the polynomial $f(x) = x^2 + px + q$, then form a quadratic polynomial whose zeroes are $(\alpha + \beta)^2$ and $(\alpha - \beta)^2$

14 If one zero of the polynomial $3x^2 - 8x + (2k + 1)$ is seven times the other, then find k .

15 If the Zeroes of the Quadratic Polynomial $x^2 + 4x + 3$ are α and β then find the quadratic polynomial whose zeroes are $1 + \alpha\beta$ and $1 - \alpha\beta$ value of k .

