



Wada Nirmiti Education Society's
GURUKUL GLOBAL SCHOOL
WORKSHEET

SUB: Maths

LESSON: 2 – POLYNOMIALS

STD: X

NAME: _____ ROLL No: _____

DATE: _____

1. Find the zeros of each of the following quadratic polynomials and verify the relationship between the zeros and their coefficients:

i. $p(x) = x^2 + 2\sqrt{2}x - 6$

ii. $q(x) = \sqrt{3}x^2 + 10x + 7\sqrt{3}$

iii. $q(y) = 7y^2 - (11/3)y - 2/3$

iv. $h(s) = 2s^2 - (1 + 2\sqrt{2})s + \sqrt{2}$

2. For each of the following, find a quadratic polynomial whose sum and product respectively of the zeros are as given. Also, find the zeros of these polynomials by factorization.

i. $-\frac{8}{3}, \frac{4}{3}$

ii. $\frac{21}{8}, \frac{5}{16}$

iii. $-2\sqrt{3}, -9$

iv. $-3/2\sqrt{5}, -1/2$

3. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - 5x + 4$, find the value of $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$.

4. If α and β are the zeros of the quadratic polynomial $p(x) = 4x^2 - 5x - 1$, find the value of $\alpha^2\beta + \alpha\beta^2$.

5. If a and b are the zeros of the quadratic polynomial $f(x) = x^2 + x - 2$, find the value of

i. $\frac{a}{b} + \frac{b}{a}$

ii. $\frac{1}{a} - \frac{1}{b}$

6. If p and q are the zeros of the polynomial $p(y) = 21y^2 - y - 2$, then find the value of $(1 - p)(1 - q)$.

7. If one of the zero of the quadratic polynomial $f(x) = 4x^2 - 8kx - 9$ is negative of the other, then find the value of k .