INDIAN SCHOOL AL WADI AL KABIR
Dept. of Mathematics 2021 – 2022
Class X - Work Sheet – Polynomials (2)

1	If α and β are the zeroes of $2x^2 - 3x - 5$, Evaluate: a) $\frac{1}{\alpha}+\frac{1}{\beta}$ b) $\alpha^2+\beta^2$
2	Write a quadratic polynomial whose product of zeroes and sum of zeroes are $\frac{3}{4}$ and $\frac{-1}{2}$ respectively.
3	If $(x-2)$ is a factor of $x^3+ax^2+bx+16$ and a - b = 6, find the values of 'a' and 'b'.
4	Find zeroes of the polynomial $3x^2- 10x - 8$ and verify the relation between zeroes and coefficients.
5	If $x=\frac{3}{2}$ is a zero of $6x^2-kx-3$, then find k and the remaining zero
6	What must be subtracted from $8x^4+14x^3-2x^2+7x-8$ so that the resulting polynomial is exactly divisible by $4x^2+3x-2$
7	Find the zeroes of the polynomial and verify the relationship between the zeroes and the coefficient a) $4x^2-4x+1$ b) x^2-3 c) $\sqrt{3}x^2-8x+4\sqrt{3}$
8	If α and β are zeroes of the polynomial $x^2-2x-15$, then form a quadratic polynomial whose zeroes are 2α and 2β
9	Find the polynomial, whose zeroes are $(2+\sqrt{3})$ and $(2-\sqrt{3})$
10	Form a quadratic polynomial, one of whose zero is $2+\sqrt{5}$ and the sum of zeroes is 4
11	If α and β are the zeroes of the polynomial $2y^2+7y+5$, write the value of α +β + αβ
12	If one root of the polynomial $5x^3+13x+k$ is reciprocal of the other, then find the value of k?
13	If α and β are the zeroes of the polynomial f(x) = $6x^2+x-2$, find the value of $\frac{1}{\alpha}+\frac{1}{\beta}-\alpha\beta$
14	If α and β are the zeroes of the polynomial f(x) = x^2-5x+k such that α – β = 1, find k
15	If α and β are the zeroes of quadratic polynomial $2x^2+5x+k$, find the value of k such that $(\alpha+\beta)^2-\alpha\beta=24$