INTERNATIONAL INDIAN SCHOOL, RIYADH.
SAI WORKSHEET-2015-16
SUBJECT: Mathematics STD: X

POLYNOMIALS:

Q.1. Find the quadratic polynomial whose zeroes are 2 and -5.

Q.2. Find the quadratic polynomial whose zeroes are 5/2 and -5/2.

Q.3. If one zero of the polynomial $(a^2+9)x^2+13x=6a$ is reciprocal of the other, find the value of a.

Q.4. If α and β are the zeroes of the polynomial $3x^2-5x-2$, *find the value of* $1/\alpha + 1/\beta$.

Q.5. If α and β are the zeroes of the polynomial $4x^2-4x+1$, *find the value of* $\alpha/\beta + \beta/\alpha$.

Q.6. Divide $3x^2- x^3- 3x + 5$ by $x - 1 - x^2$ and verify the division algorithm.

Q.7. Find all the zeroes of the polynomial $2x^3+ x^2-6x - 3$, if two of its zeroes are $\sqrt{3}$ and $-\sqrt{3}$.

Q.8. Find all zeroes of the polynomial $x^4+x^3- 34x^2- 4x + 120$, if two of its zeroes are 2 and -2.

Q.9. Find all zeroes of the polynomial $2x^4+ 7x^3- 19x^2- 14x + 30$, if two of its zeroes are √2 and -√2.

Q.10. Find k so that $x^2 + 2x + k$ is a factor of $2x^4+ x^3- 14x^2+ 5x + 6$. Also find the zeroes of the two polynomials.

Q.11. If $6x^4+ 8x^3- 5x^2+ ax + b$ is exactly divisible by $2x^2 - 5$, find a and b.

Q.12. √5 and -√5 are the two zeroes of the polynomial $x^3+ 3x^2- 5x -15$, find its third zero.