EXTRA WORK SHEET ON DIVISION ALGORRITHM OF POLYNOMIALS

1.Divide $3y^3 + 10xy^2 - 17x^2 y + 6x^3$ by $(2x - 3y)$ and verify division algorithm.

2.If 3 and -3 are two zeros of the polynomial $p(x)=x^4+x^3-11x^2-9x+18$, then find the remaining two zeros of the polynomial

3.If $x - \sqrt{5}$ is a factor of the cubic polynomial $x^3 -3\sqrt{5}x^2+13x -3\sqrt{5}$then find all the zeroes of the polynomial.

4.The expression that should be subtracted from the polynomial $f(x) = x^4 + 2x^3 -13x^2 - 12x + 21$ so that the resulting polynomial is exactly divisible by $g(x) = x^2 - 4x + 3$.

5.By actual division , find the quotient and the remainder when the first polynomial x^4+1 is divided by the second polynomial x-1.

6. The polynomial $p(x)=ax^3-3x^2+4$ and $g(x) = 2x^3-5x+a$ when divided by (x-2) and (x-3) leave the remainders p and q ,respectively. If p-2q =4 ,then find the value of 'a'.