Class – 9th **Chapter-2** **Subject Maths**

Worksheet-02 ***Polynomials*** **Date:__ /__ /__**

1. Divide $p(x)$ by $g(x)$, where $p(x) = x + 3x^2 - 1$ and $g(x) = 1 + x$.
2. Find the remainder obtained on dividing $p(x) = x^3 + 1$ by

   g(x) = $x + 1$.
3. Divide the polynomial $3x^4 - 4x^3 - 3x - 1$ by $x - 1$.
4. Find the remainder when $x^4 + x^3 - 2x^2 + x + 1$ is divided by

   $x - 1$.
5. Find the remainder when $x^3 - ax^2 + 6x - a$ is divided by $x - a$.
6. Find the remainder without actual division for following:
   a. p(x)= $5x^3 + 7x^2 - 2x$ g(x)=x+1
   b. p(x)= $2 - 7x^2 + 6x$ g(x)=x-1
   c. p(x)= $9 + z - 8z^2 + 5z^3$ g(x)=x-2
7. check (x-1) is factor of following polynomial:

   a. $p(x) = 2 + x + 2x^2 - x^3$ b. $p(x) = (x - 1)(x + 1)$