

Worksheet for Subject-Maths

Class- IX

Topic -Polynomials

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.  $p(x) = (x - 1)(x + 1)$