

# Concept\_Grade-9\_Polynomials

## Factor Theorem

1. Factorize :  $x^2 - 3x$
2. Factorize:  $12a^2b - 6ab^2$
3. If  $f(x)$  be a polynomial such that  $f(-\frac{1}{3}) = 0$ , then calculate one factor of  $f(x)$ .
4. Find the value of  $m$ , if  $x+ 4$  is a factor of the polynomial  $x^2 + 3x + m$ .
5. Find the value of  $k$ , if  $x - 2$  is a factor of  $p(x) = 2x^2 + 3x - k$ .
6. Find the value of  $k$ , if  $2x- 1$  is a factor of the polynomial  $6x^2 + kx - 2$
7. Write the factors of  $ab^7 + ab^6$
8. Factorize :  $20x^2 - 9x + 1$
9. Factorize :  $6 - x - x^2$
10. Factorize :  $8y^3 - 125x^3$
11. Find the value of  $k$ , so that polynomial  $x^3 + 3x^2 - kx - 3$  has one factor as a  $x+3$ .
12. Find the value of  $k$ , if  $x-2$  is a factor of  $f(x) = x^2 + kx + 2k$ .