



PRACTICE WORKSHEET

Subject: Mathematics

Class: CBSE 9th

Chapter: Polynomials

Worksheet: M-2

1. Verify whether 2 and 0 are zeroes of the polynomial $x^2 - 2x$.
2. Using division algorithm, find the quotient and the remainder on dividing $f(x)$ by $g(x)$, where
 $f(x) = 6x^3 + 13x^2 + x - 2$ and $g(x) = 2x + 1$
3. Use the Remainder Theorem, find the remainder when $4x^3 - 3x^2 + 2x - 4$ is divided by $x + 1$.
4. If $p(y) = y^3 + y^2 - 2y + 1$, using Remainder Theorem, find the remainder, when $p(y)$ is divided by $(y - 3)$, find the value of $p(a)$.
5. Find the remainder (using division algorithm) when
 - (a) $x^2 - 2x + 4$ is divided by $x - 1$
 - (b) $2x^3 - 3x^2 + 7x - 8$ is divided by $x - 1$
6. Use the Remainder Theorem, find the remainder when $x^4 - 3x^2 + 4x - 12$ is divided by $x - 3$.
7. Find the remainder (using remainder theorem) when
 - (a) $x^3 + 4x + 2$ is divisible by $x + 2$
 - (b) $4x^3 - 3x^2 + 5x + 4$ is divided by $2x + 1$
 - (c) $4x^3 + 5x^2 + 6x - 7$ is divided by $2x - 1$
8. Use the Remainder Theorem, find the remainder when $4x^3 - 3x^2 + 2x - 4$ is divided by $x + 1$.
9. Use the Remainder Theorem, find the remainder when $x^6 + 3x^2 + 10$ is divided by $x - 2$.
10. Find a if the remainder is a when $x^3 + 3x^2 - ax + 3$ is divided by $x - 2$.
11. If $(x + a)$ is a factor of $2x^2 + 2ax + 5x + 10$. Find a.
12. Factorize $x^2 - 3x - 9$
13. Find the value of k, if $x - 1$ is a factor of $4x^3 + 3x^2 - 4x + k$.
14. Evaluate each of the following using suitable identities:
 - (i) $(104)^3$
 - (ii) $(999)^3$