



ASSIGNMENT

Chapter – 2 (POLYNOMIALS)

CLASS – IX

1. If $x^{51} + 51$ is divided by $x + 1$, the remainder is (1)
2. Find the zero of $p(x) = 5x - 3$ (1)
3. Find the remainder when $x^4 + x^3 - 2x^2 + x + 1$ is divided by $x - 1$ (1)
4. Find the value of a if $x + 6$ is a factor of $x^3 + 3x^2 + 4x + a$. (2)
5. Find the value of a , if $x - a$ is a factor of $x^3 - ax^2 + 2x + a - 1$. (2)
6. Without actually calculating, find the value of $(25)^3 - (75)^3 + (50)^3$. (2)
7. Factorise each of cubic expression: $8x^3 - y^3 - 12x^2y + 6xy^2$ (2)
8. Factorise $6x^2 + 17x + 5$ (2)
9. Factorise : $4x^2 + 9y^2 + 16z^2 + 12xy - 24yz - 16xz$ (2)
10. Expand $(4a - 2b - 3c)^2$. (2)
11. Without finding the cubes, factorise $(x - 2y)^3 + (2y - 3z)^3 + (3z - x)^3$ (2)
12. If the polynomials $az^3 + 4z^2 + 3z - 4$ and $z^3 - 4z + a$ leave the same remainder when divided by $z - 3$, find the value of a . (3)
13. If $a + b + c = 5$ and $ab + bc + ca = 10$, then prove that $a^3 + b^3 + c^3 - 3abc = -25$. (3)
14. Find the value of $x^3 + y^3 + 15xy - 125$ if $x + y = 5$. (3)
15. If $x + y = 12$ and $xy = 27$, find the value of $x^3 + y^3$. (3)
16. Divide $3x^3 - 8x^2 + 3x + 2$ by $x^2 - 3x + 2$ and verify the division algorithm. (3)
17. Without actual division, prove that $2x^4 - 5x^3 + 2x^2 - x + 2$ is divisible by $x^2 - 3x + 2$. (4)
18. The polynomial $p(x) = x^4 - 2x^3 + 3x^2 - ax + 3a - 7$ when divided by $x + 1$ leaves the remainder 19. Find the values of a . Also find the remainder when $p(x)$ is divided by $x + 2$. (4)
19. Factorise $9x^2 + 6x + 1 - 25y^2$ (4)
20. Factorise $x^3 - 23x^2 + 142x - 120$ (4)