

Class 8 Algebraic Expressions and Identities
CBSE TEST PAPER -03

1. Simplify $(a + b + c)(a + b - c)$
2. Find the products. (i) $(2a^2 + 9)(2a^2 + 5)$ (ii) $(0.4p - 0.5q)^2$
3. Simplify. $(m^2 - n^2m)^2 + 2m^3n^2$
4. Evaluate (i) 998^2 (ii) 297×303 (iii) $(1.02)^2 - (0.98)^2$
5. Find the value of $x^2 + y^2$ if $x + y = 12$ and $xy = 14$
6. Find the value using algebraic formula i] 93×94 ii] 704^2
7. Find value of $x^2 + y^2$ if $x + 1/x = 3$
8. By division show that $x-1$ is factor of $x^3 - 1$
9. Factorise: $25 - a^2 - b^2 - 2ab$
10. Subtract: $3a(a + b + c) - 2b(a - b + c)$ from $4c(-a + b + c)$
11. If $(x + 1/x) = 4$, Find the value of $(x^2 + 1/x^2)$ and $(x^4 + 1/x^4)$
12. If $(x - 1/x) = 3$. Find the value of $(x^3 + 1/x^3)$
13. Find the remainder obtained by dividing $x^3 + 3x^2 - 5x + 4$ by $x + 1$
14. Evaluate using algebraic identities $(54)^2$, $(78)^2$, $(999)^2$
15. If $x - y = 7$, $xy = 9$ Find the value of $x^2 + y^2$
16. If $x + y = 12$, $xy = 27$ Find the value of $x^3 + y^3$
17. If $a^2 + b^2 + c^2 = 20$, $a + b + c = 6$ find $ab + bc + ca$
18. If $(x^2 + 1/x^2) = 83$. find $(x^3 - 1/x^3)$
19. What must be subtracted from $4p^2 - 2pq - 6q^2 - r + 5$ to get $-p^2 + pq - 8q^2 - 2r + 5$
20. Divide (1) $x^3 - 1$ by $x - 1$ (2) $7 + 15x - 13x^2 + 5x^3$ by $4 - 3x + x^2$
21. Evaluate (1) $1.5^3 - 0.9^3 - 0.6^3$ (2) $(a - b)^3 + (a + b)^3$ (3) $(x + 2y - 3z)^2 + (x - 2y + 3z)^2$
22. If $(x^4 + 1/x^4) = 47$ find the value of $(x^3 + 1/x^3)$
23. Find the product of (i) $(x^4 + 1/x^4)$ and $(x + 1/x)$ (ii) $(2x^2 + 3x - 7)(3x^2 - 5x - 4)$
24. Two adjacent side of a rectangle are $5x^2 - 3y^2$ and $x^2 - 2xy$ Find its perimeter
25. The perimeter of a triangle is $6p^2 - 4p + 9$ and two of its adjacent side are $p^2 - 2p + 1$ and $3p^2 - 5p + 3$. Find third side of triangle.