

Concept_Grade-9_Polynomials

Algebraic Identities

1. Write the coefficient of x^2 in the expansion of $(x - 2)^3$
2. If $x + \frac{1}{x} = 4$, then calculate the value of $x^2 + \frac{1}{x^2}$
3. Calculate the value of $\frac{83^3 + 17^3}{83^2 - 83 \times 17 + 17^2}$
4. Expand by using identity $(2x - y + z)^2$.
5. Expand: $\left(\frac{1}{3}x - \frac{2}{3}y\right)^3$
6. Factorize: $9x^2 + 6xy + y^2$
7. Factorize : $8a^3 + 8b^3$
8. Factorize : $8x^3 - (2x - y)^3$
9. Factorize : $64a^3 - 27b^3 - 144a^2b + 108ab^2$
10. Using a suitable identity, find $(98)^3$.
11. Evaluate 111^3 , using a suitable identity.