



INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

CH: 9 Algebraic Expressions And Identities

Name: _____ Date: _____ Class: VIII Sec: ____

1. Multiply

a) $2x^3y$, $-\frac{1}{8}xy^3$, $\frac{4}{3}y^3z$

b) $\frac{3}{2}xy^2z$, $\frac{1}{3}xy^2z^2$, $-4x^2y^2z^2$

2. If $x = 2$ and $y = -8$ Simplify and find the value of $(x - y)^2$

3. State the degree of the polynomial :

$$7x^3y^3 - 45x^2y^2z + 8x - 15.$$

4. Using the suitable identity find the products

a) $\left(\frac{x}{2} + 1\right)^2$

b) $(2x^2y + 3xy^2)^2$

c) $\left(x - \frac{1}{x}\right)^2$

d) 390×410

5. A shirt cost ₹ $(a^2 - ab - b^2)$ and a pair of trousers cost ₹ $(2a^2 + 8ab - 2b^2)$ and a pair of shoes ₹ $(a^2 - 3ab + 4b^2)$. After collecting these three items from the store, Ranjan paid Rs $(2a + b)^2$. What balance will Ranjan receive from the cashier?

6. The dimensions of a swimming pool is $(a + b)$, $(2x - 3b)$ and $(3a - 2b)$. find the volume of the swimming pool.



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7. Find the product :

a) $a^2b^2 \left(\frac{3ab}{4} + \frac{ab^2}{3} + 1 \right)$

b) $(x^2 + y^2 + z^2)(x + y + z)$

8. Simplify

a) $(a - b)^2 - (a + b)^2$

b) $\left(\frac{3}{4}xy - 1 \right)^2 - \left(\frac{3}{4}xy + 1 \right)^2$

9. Verify the identity $(x + a)(x + b) = x^2 + (a + b)x + ab$

10. Multiply the polynomials: $4xy(y^2z - xz^2)$

11. Find the value of 306^2