

CHAPTER - ALGEBRAIC EXPRESSIONS AND IDENTITIES.

Things to Remember:

1. Terms are added to form expressions.
2. Expressions that contains exactly one, two and three terms are called monomials, binomials and trinomials respectively.
3. Any expression containing one or more terms with non-zero coefficients and variables having non-negative exponents is called polynomial.
4. Standard Identities.
 $(a+b)^2 = a^2 + 2ab + b^2$
 $(a-b)^2 = a^2 - 2ab + b^2$
 $(a+b)(a-b) = a^2 - b^2$
 $(x+a)(x+b) = x^2 + (a+b)x + ab$

ASSIGNMENT

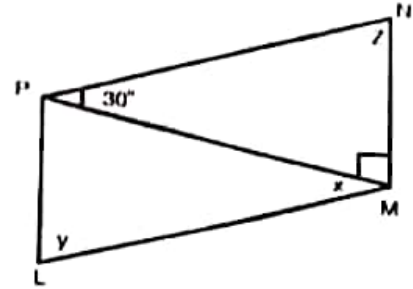
- Q1. Classify the following as monomial, binomial or trinomial
(i) $a+9b$ (ii) $6x^2-5x+3$. (iii) $79x$ (iv) $p^2 + q^2 - r^2$
- Q2. why are $8a$ and $8ab$ not like terms?
- Q3. Add the following.
(i) $9a^2bc - 3ab, 15ab + 6 + 12a^2bc$
(ii) $p^2q^2 + r^2, 4p^2q^2 - 6r^2, 15p^2q^2 + 8r^2$
- Q4. Subtract the sum of $8ab+6+9ab^2, 7-5ab+3ab^2$ from the sum of $12ab^2+4ab+3$ and $15ab-10+8ab^2$.
- Q5. Find the area of the rectangle whose length is m^2n^2 and breadth is mnp^2 .
- Q6. Find the volume of the rectangular boxes whose
(i) $l=3ab, b=9ab^2, h=12abc$
(ii) $l=7xy, b=3x^2y^2, h=10xy^3$.

Q4. The interior angle of a regular polygon is 156° . Find the numbers of sides of the polygon.

Q5. The exterior angle of a regular polygon is one third of its interior angle. How many sides has the polygon?

Q6. The ratio of two sides of a parallelogram is 3:5 and its perimeter is 48m. Find the sides of the parallelogram.

Q7. In the figure find the value of x, y, z . It is a parallelogram.



Q8. Name the quadrilateral whose diagonals
 (i) Bisect each other
 (ii) Are perpendicular bisectors of each other
 (iii) Are equal.

Q9. Two opposite angle of a parallelogram are $(3x-2)^\circ$ and $(50-x)^\circ$. Find the measure of each angle of the parallelogram.

Q10. One angle of a quadrilateral is 150° and the remaining three angles are equal. Find the three equal angles.

ANSWERS.

- Ans. 1. $36^\circ, 72^\circ, 108^\circ, 144^\circ$.
 Ans. 2. $x=110^\circ$
 Ans. 3. 120°
 Ans. 4. $n=15$
 Ans. 5. $n=8$ sides.
 Ans. 6. 9m, 15m.
 Ans. 7. $x=30^\circ, y=60^\circ, z=60^\circ$
 Ans. 8.
 (i) Parallelogram, rhombus, square, rectangle
 (ii) Rhombus, square.
 (iii) Square & rectangle.
 Ans. 9. $37^\circ, 143^\circ, 37^\circ, 143^\circ$.
 Ans. 10. 70°