SUBJECT- MATHEMATICS
Grade – X (2023-24)
TOPIC : POLYNOMIALS

Brief Description:
In this chapter students will be taught about polynomials, their terminology, Geometrical meaning of the zeroes of polynomials, Relationship between the zeroes and the coefficients of the polynomials and Division algorithm of the polynomials.

Previous Knowledge:
Identifying different types of polynomials, Zeroes of polynomials, Factorisation of polynomials, Cartesian Plane and Plotting points on it.

Specific Learning Objectives:

To enable the students to:

S1) Define the polynomial and its terminology. KNOWLEDGE

S2) Find the zeroes of a polynomial. UNDERSTANDING

S3) Establish relationship between the zeroes and the coefficients of quadratic polynomial.
ANALYSIS

S4) State and verify the Division Algorithm of the Polynomials.
KNOWLEDGE and UNDERSTANDING

Behavioral Objectives:

To enable the students to:

B1) Develop the skill in finding the zeroes of a quadratic or cubic polynomial by plotting graph.

UNDERSTANDING

B2) Identify the situations/examples in real life where we can find parabola or parabolic path.

APPLICATION

Activity:
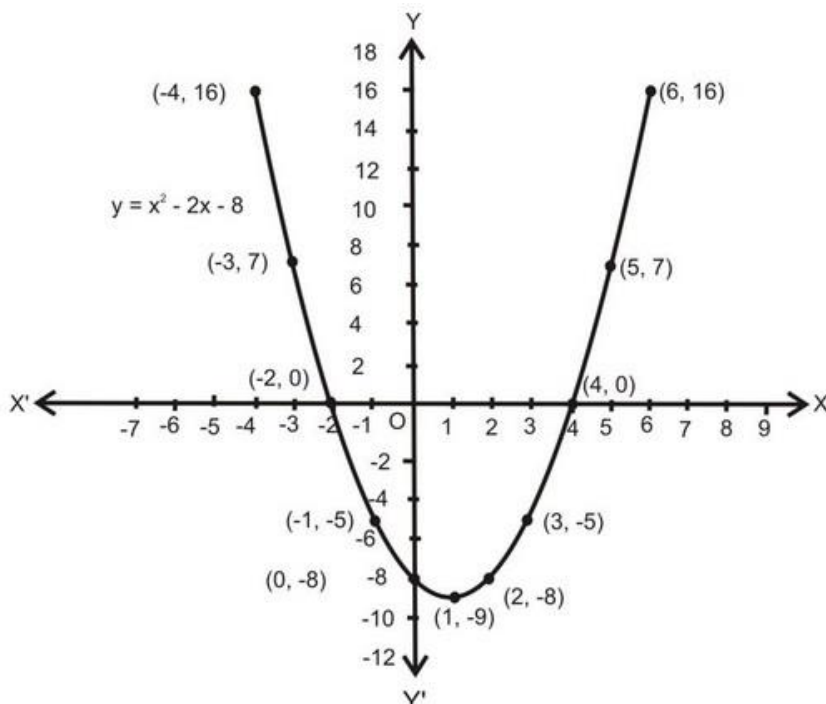
ACT – 1: To Identify zeroes of Quadratic Polynomial by plotting Parabolic Curve for it.
UNDERSTANDING and ANALYSIS

$$p(x) = x^2 - 2x - 8$$

x	-4	-3	-2	-1	1
$y = p(x)$	16	7	0	-5	-9

x	2	3	4	5	6
$y = p(x)$	-8	-5	0	7	16

<u>Assessment :</u>

Marks	Description
3	Finding coordinates of points for the given polynomial.
3	Plotting all the points correctly on the Cartesian Plane.
2	To draw the smooth curve passing through all the points.
2	To identify the zeroes of the polynomial.

<u>Expected Learning Outcomes:</u>

Students would be able to:

1) Identify different types of polynomials and write them in general form. KNOWLEDGE

2) Identify the numerical coefficients in different terms of the polynomial. UNDERSTANDING

3) Find zeroes of a polynomial. UNDERSTANDING

4) Verify the relationship between the zeroes of polynomial and its numerical coefficients.
   ANALYSIS

5) Plot the graph for the given polynomial and tell the zeroes from it. APPLICATION

6) Give examples of parabolic curve/path in our real life situation. APPLICATION

<u>Placement of Objectives, Instructional Activities and Assessment</u>:

KNOWLEDGE	UNDERSTANDING	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
S1, S4	S2, S4		S3		
	B1	B2			
	ACT - 1		ACT - 1		