Brief Description: In this chapter students will learn about irrational numbers, real numbers and their expansion .They will also learn about operations on real numbers and laws of exponents for real numbers.

Previous Knowledge
Natural numbers, Integers,Rational numbers and their representation on the number line.

Specific Objectives
To enable the students to:

S1) Define Irrational numbers.KNOWLEDGE

S2) Understand real numbers and their decimal expansion. UNDERSTAND
S3) Differentiate between Rational and Irrational numbers. ANALYSIS
S4) Represent Irrational numbers on number line. KNOWLEDGE
S5) Perform operations on real numbers and use laws of exponents for real numbers. APPLICATION
S6) Understandthe concept of rationalizing the denominator. UNDERSTANDING

Behavioral Objectives:
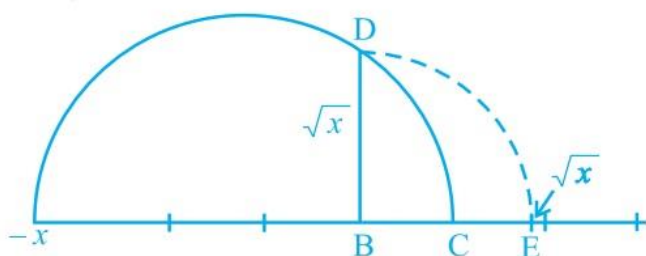To enable the students to:

B1) Understand that a problem can have many solutions. UNDERSTANDING
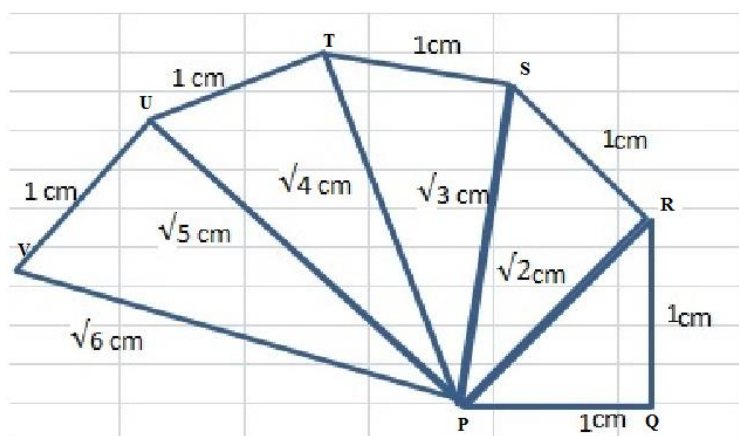
PROCESS/ACTIVITIES:
Activity – 1:

Students will be asked to represent real number $\sqrt{x}$ by semicircle method. APPLICATION

Marks	Description
3	Able to represent $\sqrt{x}$ on number line correctly.
2	Able to construct semicircle and join BD.
1	Able to draw perpendicular

Activity- 2:

Students will be asked to construct a square root spiral using geometrical instruments. APPLICATION

Assessment –

Class test/Worksheet/Activity.

Marks	Description
3	Able to represent $\sqrt{x}$ with accuracy and neatness
2	Able to construct proper semicircle and join BD.
1	Able to draw perpendicular bisector of x+1and find centre O.

Expected Learning Outcomes:
Students will be able to:
1) Understand that rational numbers andirrational numbers together make real numbers.UNDERSTANDING
2) Understand difference between Rational numbers and Irrational numbers.UNDERSTANDING
3)Find Decimal representationof real numbers.APPLICATION

3) Apply laws of exponents to perform operation for real numbers. APPLICATION
4) Rationalize the denominator.APPLICATION

Placement of Objectives, Instructional Activities and Assessment

KNOWLEDGE	UNDERSTANDING	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
S1,S4	S2 , S6	S5	S3		
			B1		
		ACT 1, ACT 2			
		A1			