

## Class – VIII

### Lesson Plan (2023-24)

### Subject- Mathematics

**Topic:** Linear equation in one variable

**KPI 3 Definition (VII) :-** Enhancing comprehension skill while framing simple equations

#### **Brief Description of the lesson:**

In this lesson, students will learn about linear equation, rules of solving linear equations and their application in daily life.

#### **Objectives:**

**I - Specific Objectives** To enable the Students to:

- |     |             |   |                  |
|-----|-------------|---|------------------|
| S 1 | Identifying | the linear equation                       | (K- Identifying) |
| S 2 | Explain     | the rules of solving linear equation      | (U- Explain)     |
| S 3 | Solve       | equation when variable lies on both sides | (A- Execution)   |
| S 4 | Explain     | the process of cross multiplication       | (U- Explain)     |
| S 5 | Solving     | an equation by cross- multiplication      | (A-Execution)    |
| S 6 | Frame       | the linear equation from word problem     | (SY-Designing )  |

**KPI 3** we will make the students to frame the equation for given situations and understand Mathematical operations for particular word. Students understand the proper sign for given word and to break word problems in to small parts. AN(Differentiate)

#### **II - Behavioral Objectives**

Through the practice of these concepts students will be able to

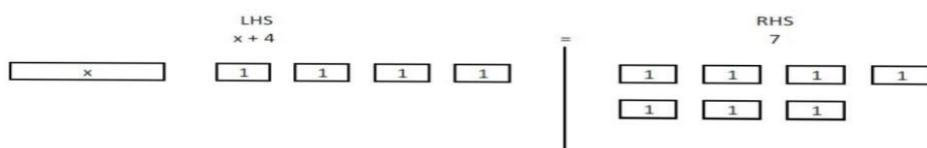
- B1 Solve day to day life problems based on algebraic equations such as age related problems, area and perimeter related problems (A- Execution)
- B 2 Interpret the situation (U- Interpret)
- B 3 Frame the equation (SY-Designing )
- B 4 Solve the Equation (A- Execution)

#### **Process / Activities**

Activity (to support learning)

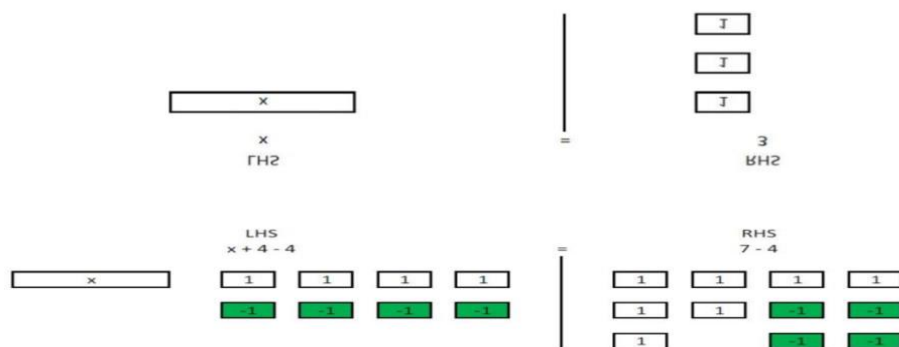
**ACT 1 :** Frame a real life situation which can be expressed as linear equation involving one variable. (SY)

- ✓ Start by taking one white rectangular piece to represent 'x' and 11 white square pieces to represents constant 4 and 7.
- ✓ Create two separate work areas – one for LHS and the other for RHS of the equation.
- ✓ Keep the white rectangle piece and 4 white square pieces on LHS and 7 white square pieces on RHS.
- ✓ To remove the constant 4 on LHS, add three green (negative) colour square pieces to both areas. This is equivalent to adding  $-3$  to both sides. This is done to create 0 pairs.



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✓ Remove the 4 zero pairs from each side to obtain the solution  $x = 3$ .



### Expected Learning Outcomes

Students will be able to

- 1 Solve equation when variable lies on both sides (A- Execution)
- 2 Understand process of cross multiplication (U-Interpret)
- 3 Understand rules of solving linear equation (U-Interpret)
- 4 Solving an equation by cross- multiplication (A- Execution)
- 5 Frame linear equation (SY-Designing )
- 6 Application of linear equation. (A- Execute)
- 7 Age related problems, area and perimeter related problems etc (A-Execution)

### Assessment:

**KPI 3** Activity to frame algebraic expressions for give situations will be conducted . Assesment will be done on the basis of practice sheet / activity/ assignment

Match the following question with correct equation and then match equation with correct solution

Questions	Equations	Solution	
<b>A 1:</b> Five times Rohan's pocket money is Rs 80. What is his pocket money.	$5x = 80$	16	(A- Execution)
<b>A 2:</b> The sum of three consecutive even natural numbers is 48. Find the smallest of these numbers	$3x + 6 = 48$	14	(A- Execution)
<b>A 3:</b> If 11 is subtracted from half of a number the result is 4	$x/2 - 11 = 4$	30	(A- Execution)

### Placement of Objectives, Instructional Activities and Assessment

TOPIC / START DATE / ASSESSMENT					
KNOWLEDGE	UNDERSTANDING	APPLICATION	ANALYSIS	SYNTYHSIS	EVALUATION
<b>S 1</b>	<b>S 2</b>	<b>S 3</b>			
	<b>S 4</b>	<b>S5</b>		<b>S 6</b>	
<b>Activity</b>					
				<b>ACT 1</b>	
<b>Assessment</b>					
		<b>A 1</b>			
		<b>A 2</b>			
		<b>A 3</b>			