

SUBJECT : MATHEMATICS
CLASS : VI
TOPIC : RATIO AND PROPORTION

Pre-Content/Content/Post-Content	Learning Outcomes/Objectives	
	General	Specific
<u>PRE-CONTENT</u> • Introduction of Ratio	Students will be able to ✓ recall fractions	Students will be able to ✓ recall fractions and learn about ratios
<u>CONTENT</u> • Simplest form • Equivalent ratios • Comparing ratios • Dividing a whole number in the given ratio • Proportion	✓ reduce fractions to simplest form ✓ understand the meaning of ratios and equivalent ratios ✓ compare ratios ✓ learn to divide in the given ratio ✓ learn the relation	✓ reduce fractions to simplest form and learn to write them as ratios ✓ recognize equivalent ratios and convert given ratio to equivalent ratios and find more ✓ learn methods to compare ratios (using ideas from fractions) ✓ learn to divide a given whole number in the given ratio ✓ correlate equivalent fractions to proportion and apply the same to continued proportion
<u>POST-CONTENT</u> • Unitary method	✓ solve problems on unitary method	✓ apply the knowledge in solving problems on higher order thinking skills

Home Work /Assignments:

1. NCERT exercise/solved examples given as home task.
2. Extra practice questions.

Teacher's Activity	Student's Activity	Teacher's Observation and Remedial
Teacher will recall fractions using various examples. show how to reduce ratios to simplest form. take up examples to explain equivalent ratios and conduct the activity on it. (Annexure-12) discuss the method while comparing ratios with examples. explain how to divide given ratios. explain the concept of proportion with examples. explain unitary method and solve a few problems based on real life.	Students will take part to recall fractions and learn the concept of ratios. reduce the fractions to simplest form and write as ratio. perform the activity as per the instructions given, to examine equivalent ratios and write their observations. (Annexure-12) compare ratios and solve the textbook exercises. divide a whole number in the given ratio. compare ratios to form proportion. simplify and solve application based problems.	Teacher will write his/her observations after the completion of the topic.

Teaching Aids: Smart board, ICR, Flash cards.

Methodology/Innovative Methods : Discussion, Brain storming, Activity oriented.

Interdisciplinary Links: Linked with Art, Real life.

H.O.D.

Coordinator

Vice-Principal

Principal

Annexure-12

Subject	MATHEMATICS
Class	VI
Chapter/Unit	Ratio and Proportion
Topic	Equivalent Ratios
Time	35 minutes
Nature of Activity	Group

What will I learn (Learning outcome)?

To examine equivalent ratios.

Skills:- Critical Thinking, Problem Solving, Psychomotor Coordination, Examining

What I have to do?

To examine equivalent ratios by playway method.

What do I require?

Thick paper, pair of scissors, sketch pen and adhesive.

What do I need to know?

Concept of Ratio, Simplest form and Equivalent ratios.

➤ **Teacher's Activity**

Teacher will

- make cut-outs of 40 slips depicting different ratios and put them in an open box.
- enable the students to recall the concept of ratio, equivalent ratios and discuss its simplest form.
- make pairs of the students and will explain the steps of the activity.

9 : 36	30 : 105	2 : 7	32 : 48	12 : 26
10 : 35	2 : 3	24 : 52	28 : 98	1 : 4

How will I proceed?➤ **Student's Activity**

- Each pair will pick one card and will find the equivalent ratio from the box in one minute.
- Other pairs follow the same procedure and will find the equivalent ratio.
- Then, whichever pair gets equivalent ratios in given time, will be the winner.

What have I observed?

Complete the following table:

Pair	Ratio on the first slip	Ratio on the second slip obtained	Equivalent Ratios (Yes/No)
1			

(Similar observation table will be prepared by Pair 2, Pair 3, Pair 4...)

What have I learnt?

To examine _____ ratios.

What am I curious to know?

Make five ratios equivalent to the ratio of your height (in cm) to the length of your shadow (in cm) from a certain point.

Let me evaluate myself

1. Find any four equivalent ratios of 4 : 5.

- (a) _____
 (b) _____
 (c) _____
 (d) _____

2. Fill in the equivalent ratios:

- (a) $2 : 7 = \underline{\hspace{1cm}} : 21 = \underline{\hspace{1cm}} : 35$
 (b) $6 : 9 = 12 : \underline{\hspace{1cm}} = 18 : \underline{\hspace{1cm}}$
 (c) $1 : 10 = \underline{\hspace{1cm}} : 50 = \underline{\hspace{1cm}} : 100$
 (d) $3 : 8 = 14 : \underline{\hspace{1cm}} = 24 : \underline{\hspace{1cm}}$

3. Check whether the given ratios 16 : 40 and 4 : 10 are equivalent or not:

4. Write two equivalent ratios for the following:

(a)

5		
11		

(b)

13		
15		

5. Alex makes an alloy by mixing two types of metals, A and B. To make one unit of alloy, he needs 12 grams of metal A and 17 grams of metal B. If he makes 5 units alloy, how many grams of metal A and metal B does he need?
