Ramkrishna Mission Sikshanamandira

Course 134

School Internship: 8 Weeks

Method 2 – Mathematics

(Practice teaching report, 15 Learning Designs, Internship Certificate, Feedback sheet)

Submitted by:

Uddalok Saha

B.Ed. Semester III, session 2022-23

College roll number: F04

University registration number A02-1112-1117-21

Index No. : F1- 042 Institution Code (H.S.) : 106355

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Ref. No. ..... Date 29/11/22

TO WHOM IT MAY CONCERN

This is to certify that Uddalok Saha (Subject - Computer Science), 2nd Year (3rd Semester) B.Ed trainee of **Ramakrishna Mission Sikhshanamandira**for the session 2021-23 have regularly attended and successfully completed the Eight weeks school attachment programme, **course-** 134 – practice teaching in their respective subject from **1st September to 30thNovember, 2022** in our school.

Wish him all the best in the journey.

With regards,

S. Barman
29/11/22

Date: 30 Nov, 2022

Place: Howrah

Name: Sudip Barman

Designation: Teacher-in-Charge

Teacher-in-Charge
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Content

LEARNING DESIGN -

Name of school
Ghusuri Uchcha Madhyamik Vidyalaya

Class : VI

Time : 40 minute

Date : 12/09/2022

Name of the teacher :
UDDALOK SAHA

Subject : Mathematics

Teaching unit :
Roman numerals

Sub unit :
Roman numerals, addition & subtraction

Today's lesson :
Roman Numerals, addition, subtraction

Learning goals : After completing the lesson students will be able to :

Remembering	• Recall natural numbers • Meaning of Roman numerals
Understanding :	• Understand and represent the roman numerals. • Four rules for using Roman numbers.
Applying	• Recognise Roman numerals from clock faces (Wall clock / wrist watch) • Preliminary pages, appendices of a book are numbered in roman numerals.
Analyse	• Analyse that four identical Roman numerals cannot appear in a row.
Evaluate	• Conclude the Roman numerals only use seven symbols (I, V, X, L, C, D & M)

- Creating
  - Write numbers in roman numerals
  - Convert roman numbers in natural numbers

Analyse learners and contexts

To determine the general characteristics and primary behaviour of the students the following questions will be asked on the basis of present lesson.

1) What are natural numbers ?

2) What are English alphabets ?

Develop and select learning materials

- General learning materials

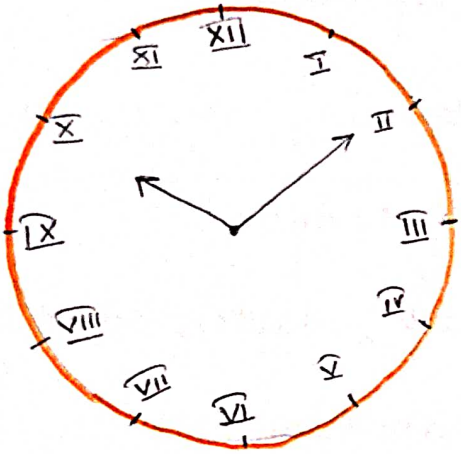
  Black board, chalk, duster, school text books.

- Specific learning materials

  Match sticks, charts, etc.

Learning strategies

Learning Areas	Learning Strategies
Introduction & Meaning	Teacher asked Students – • Have you seen numbers in a wall clock ? Student response : Yes sir • Have you seen numbers written after names of kings eg: Henry VIII



A clock (alarm clock) shown during teaching as a teaching aid

Then teacher explains the above number are written in the form of Roman numerals.

Teacher gives the definition & explains Roman numbers —

It is a special kind of numbers or numerical notation that was earlier used by Romans.

2nd phase

Symbols used for Roman numeral system

Teacher informs the students that only seven symbols are used & asks students to note down -

I → 1	C → 100
V → 5	D → 500
X → 10	M → 1000
L → 50	

3rd phase

Rules to write roman numbers

Teacher explains the following rules to be followed if we have to represent a number in roman numerals form.

(demonstration method)

Rule 1 - If symbol is repeated, its value is added.

eg: II = I + I = 1 + 1 = 2

Rule 2 - No symbol is repeated more than 3 times.

Eg - III is allowed, IIII is not allowed.

Rule III → If smaller value is written to right of greater value symbol its value gets added.

Eg. → VI = V + I = 5 + 1

XII = X + I + I = 10 + 1 + 1 = 12

Rule IV → If the symbol of smaller value is written to the left of greater value, its value gets subtracted.

IV = V − I = 5 − 1 = 4

XC = C − X = 100 − 10 = 90

4th Phase Explaing Some problems

Teacher writes some questions on board & solves using discussion method with active participation of students.

1. Write 69 in roman numerals
2. Convert 1984 in roman numerals
3. Compute the following roman numerals.

MXX II − LXX − LII

Design for evaluation :

The following questions will be given to students to evaluate their progress -

1) What is 500 in roman numeral form (MK)
2) What is C+11 in roman numeral form (MK)
3) Convert 1009 in to roman numeral (MK)
4) Make a list (at least 5) where Roman no. used to everyday life. (P.K)

Diagnosis for remedial class

If there is any need of remedial class then the teacher will arrange it accordingly.

23/11/22

Signature of Administrator

Signature of trainee Teacher.

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16/11/22

Signature of school teacher

LEARNING DESIGN - 2

Name of School
Ghusuri Uchcha Madhyamik Vidyalaya

Class : VIII

Time : 40 minute

Date : 14/09/2022

Name of the teacher :
UDDALOK SAHA

Subject : Mathematics

Teaching unit : Pie chart

Sub unit :
- Meaning of pie-chart & measure of central angle
- construction of pie-chart

Today's lesson -
- meaning of pie-chart & measure of central angle

Learning goals : After completing the lesson students will be able to —

Remembering :
- Define the term pie-chart (FK)
- Recall the term central angle (FK)

Understanding : Understand that the measure of the angles of the sectors about the center of a circle sum to 360°.

Applying :
- Calculate or compute measure of central angle (PK)
- Apply the knowledge learned from measure of central angle & use of it in real life. (PK)

Analyzing :
- Analyze the pie chart by considering what ~~procedure~~ percentage of the whole each segment represents (PK)

Evaluating : To judge how fraction can be represented in pie-chart (PK)

Analyse Learners & contents

The following questions will be asked to determine the general characteristics of primary behaviour on the basis of present lesson.

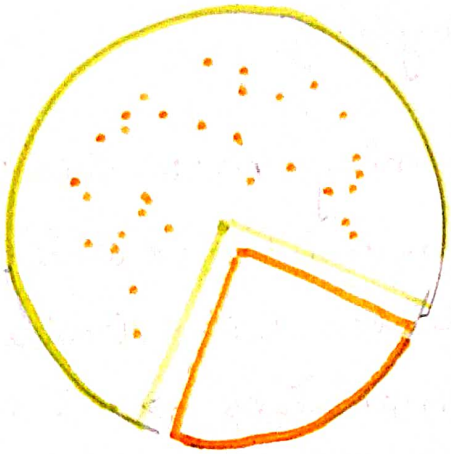
1) What is central angle ?
2) What is acute angle ?
3) What is obtuse angle ?

Develop & select learning materials :

- General learning materials → Blackboard, chalk, duster, school books,
- Specific learning materials → a newspaper cut showing pie-chart.

Learning strategies :

Learning Areas	Learning Strategies
1st phase Introduction & Concept of pie-chart	Teacher asked students – • Do you love pizza ? (Response Yes sir) • What % age do you love to eat Pizza pies (Response 50%) • If you eat 50% how much % will remain ? (Respone 50%) Teacher gives the definition & explain Pie-chart – Pie-chart also known as a circle chart dividing the circular statistical graphic into sectors or sections to illustrate numerical



Drawn on board

Problems.

2nd phase formula

Teacher writes the formula for measuring the central angle on board & asks the students to write it.

$$\frac{\text{Given data}}{\text{Total data}} \times 360$$

3rd phase Explaining a problem

Teacher writes a question on board & solves it using discussion method through active participation of students.

Problem

Priya lists down her monthly expenditure as follows:

Expenditure	Amount (₹)
Rent	4000
Food	5400
Clothing	2800
Savings	400

Find the measure of central angel.

Problem : The number of hours spent by a school boy on different activities in a working day is given below —

Act.	Sleep	School	Home	Play	Others	Total
No. of hours	8	7	4	2	3	24

find the measure of central angle.

Design for Evaluation :

The following questions will be given to the Students to evaluate their progress :-

1) Employees of a company have been categorized according to their religions as given below :

Religions	Hindu	Muslim	Sikh	Christan	Others	Total
No. of workers	420	300	225	105	30	100

find the measure of central angle (M.K)

2) Find the measure of central angle (M.K) from the following given data.

Items	Rent	Education	food	cloothing	Others
Amount(₹)	2700	1800	2400	1500	2400

Diagnosis for remedial class : —

If there is any need of remedial class then the teacher will ~~att~~ arrange it accordingly.

18/Chatterjee 28/11/22

Signature of administrator

Spal 16/11/22

Signature of School teacher

Signature of trainee teacher

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LEARNING DESIGN -

Name of school
Ghusuri Uchicha Madhyamik Vidyalaya

Class VIII

Time 40 minutes

Date : 14/09/2022

Name of teacher: UDDALOK SAHA

Roll no. F04

Subject : Mathematics

Teaching unit : Pie chart

Sub unit : • meaning of pie chart, & measure of central angle
• construction of pie chart

Today's lesson –

• Construction of pie-chart

Learning Goals : After completing the lesson students will be able to –

Remembering	• Recall the term pie-chart • Recall acute angle and obtuse angle.
Understanding	• Understand the size of each segment represents the segments' proportion to the whole set of data (CK)
Applying	• Critically read pie-chart & use information to perform calculations & make predictions. (PK)
Analyzing	• Analyze and interpret data in pie chart to answer questions (PK)
Evaluating	• Judge how fraction can be represented in pie-chart. • Evaluate that a pie-chart is used to represent a part-to-whole relationship. (PK)

◦ Creating	Solve complex mathematical problems using charts / data / picture (MK)

Analyse learners and context

The following questions will be asked to students to determine the general characteristics of primary behaviour on the basis of present lesson.

1) What is obtuse angle.
2) Give the formula to measure central angle.

Develop and select learning materials :-

- General learning materials → Black board, chalk, duster, school text books.
- Specific learning materials → charts, reference books, etc.

Learning strategies.

Learning Areas	Learning strategies
1st phase Steps to make pie-chart	Teacher explains the following steps to make a pie-chart using lecture method. ◦ Find the central angle for each component using formula. ◦ Draw a horizontal radius. ◦ Starting with horizontal radius, draw radii making central angles, corresponding

to the value of respective components.

- Repeat the process for all components to the given data.
- These radii divide the whole circle into various sectors.
- Thus we obtain a pie-chart.

2nd phase
Explaining a problem

Teacher solves a problem on construction of pie chart from text book using discussion method through active participation of students.

Design for evaluation

The following question will be given to the students to evaluate their progress :-

1) The following table shows the expenditure pattern in a family : (M.K.)

Items	Food	Clothing	Rent	Education	Unforeseen events	Medicine
Expenditure (₹)	40	20	10	10	15	5

2) The following data shows the amount spent on the construction of a house. Draw a pie diagram (M.K)

Items	Cement	Timber	Bricks	Labour	Steel	Misc.
Expenditure (₹)	60	30	45	75	45	45

Diagnosis for remedial class :-

If there is any need of remedial class then, the teacher will arrange it accordingly.

29/11/22

Signature of Administrator

16/11/22

Signature of School teacher

Malalok Saha

Signature of trainee teacher

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LEARNING DESIGN

Name of the school
Ghusiri Uchcha Madhyamik Vidyalaya

Class X

Time 45 minute

Date : 16/09/2022

Name of the Teacher
UDDALOK SAHA

Roll no. F04

Subject : Mathematics

Teaching unit : Mensuration

Sub unit :
- Surface area of cuboid & cuboids
- Volume of cube & cuboids
- Surface area & volume of cone

Today's lesson :
- Surface area and volume of cone

Learning goals : After completing the lesson students will be able to :

Remembering :
- Recall the shape of a cone (F.K)
- Recall the area of a circle & Perimeter of circle. (F.K)
- Recall the area of triangle (F.K)
- Define the term cone. (F.K)

Understanding
- Importance of CSA ; Volume of cone (C.K)

Applying
- Apply the formula to find out the CSA and T.S.A of cone in real life (P.K)
- Solve problems logically (P.K.)

Analyzing
- Analyze the formula for CSA & TSA of cone
- Analyze the formula for volume of cone (P.K)

Evaluating	• To differentiate the formula of C.S.A & TSA of a cone (PK)
Creating	• To solve complex mathematical problems on CSA, TSA & volume of cone (MK)

Analyse learners and contexts :

The following questions will be asked to the students to determine the general characteristics of primary behaviour on the basis of present lesson.

1) What is the area of circle ? give formula
2) What is the value of π (Pi)
3) State Pythagoras theorem.

Develop & Select learning materials :-

General learning materials → Black board, chalk, duste, school text book,

Specific learning materials → clown's cap, ice cream cone, Charts, Reference book.

Learning Strategies :

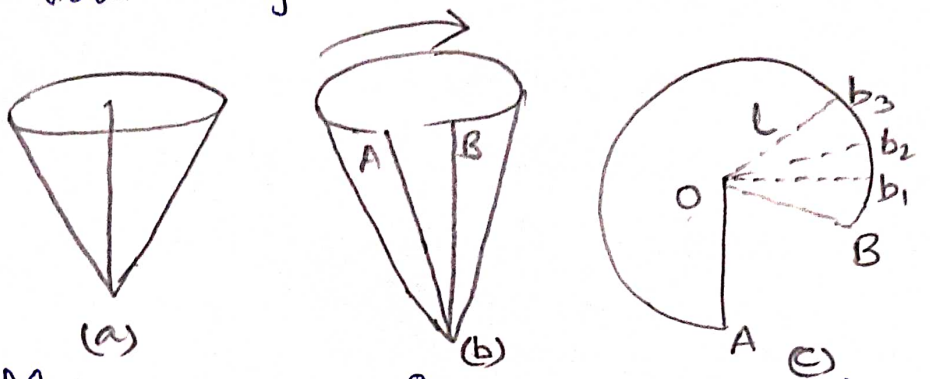
Learning Areas	Learning strategies
1st phase : Concept of cylinder	Teacher draws a cone on board & gives proper definition of it using Lecture Method. "A cone is a 3 dimensional shape that has a circle at the bottom and sides that narrow to a point"

2nd phase

Explaining the formula

DEMONSTRATION METHOD

Teacher shows a clown's cap which is in the form/shape of a cone. Teacher now derives the formula of CSA, TSA, & volume of cone.



Make a cone using paper. Now bring the sides marked A & B at the tips together, You can see the curved portion that will form the circular base of the cone (fig. c)

Now if the paper is cut into hundreds of little pieces (fig. c), each cut will form a small triangle whose height is slant height l.

So, area of each triangle $= \frac{1}{2} \times b \times l$

So, area of entire piece of paper.

= Sum of all the area of triangles

$= \frac{1}{2} b_1 l + \frac{1}{2} b_2 l + \frac{1}{2} b_3 l + \ldots + \frac{1}{2} b_n l$

$= \frac{1}{2} \times l \times$ (length of entire curved boundary)

$= \frac{1}{2} \times L \times 2\pi r$

$= \pi r l$

TSA of cone = CSA of cone + Area of circle

$= \pi r l + \pi r^2 = \pi r (l + r)$

volume $= \frac{1}{3}\pi r^2 h$

Slant height $(l) = \sqrt{h^2 + r^2}$

Teacher writes a question on board and asks the students to calculate CSA, TSA, & volume of cone. Teacher solves the problem using discussion method through active participation of students.

Problem :

The height of a cone is 24 cm. & the diameter is base is 14 cm find slant height, volume, CSA, TSA.

Design for Evaluation

The following questions will be given to the students to calculate their progress :-

1) A cone 8 m has a CSA of 188.4 cm^2. find its volume $(\pi = 3.14)$ (MK)

2) How many meteres of cloth 5m wide, will be required to make a conical tent, the radius of whose base is 7m & height is 24 m? (MK)

Diagnosis for remedial class :

If there arises any need of extra class, then the teacher will arrange it accordingly.

Signature of administrator

Signature of school teacher

Uddalok Saha

Signature of trainee teacher

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LEARNING DESIGN

Name of school
Chuchuri Uchuba Madhyamik Vidyalay

Class : VIII

Time : 45 min

Date : 19/09/2022

Name of the teacher :
UDDALOK SAHA

Roll no. - F04

Subject : Mathematics

Teaching Unit : Rational Numbers

Sub Unit : meaning, types, addition, subtraction, multiplication, & division of rational numbers.

- Representation of Rational no. on the number line.
- Rational no. between two rational numbers.

Today's Lesson - Meaning, Types, Addition, Subtraction, Multiplication, division, of rational numbers.

Learning Goals : After completing the lesson students will be able to :

Remembering :
- Define the term rational numbers (F-K)
- Recall the term natural numbers, whole numbers, integer (F-K).

Understanding
- Understand the properties of Rational numbers. (C-K).

Applying
- Apply the properties & perform the arithmetic operations on Rational numbers (P-K)

Analyzing
- Analyze the different types of rational numbers (P-K)

- Evaluating
  - Judge that every integer is a rational number, since each integer can be written in the form of $n/1$ (P.K)
- Creating
  - Solve some complex mathematical problems on Rational numbers. (M.K.)

Analyse Learners & Context :-

The following questions will be asked to the students to determine the general characteristics of primary behaviour on the basis of the present lesson.

1) What are natural numbers ?
2) What are integers ?
3) What is whole number?

Develop and select learning materials.

General Learning materials → Black board, chalk, duster, school text books,

Specific Learning materials → Calculator (to show number divided by zero), charts, reference books (if required).

Learning Strategies :-

Learning Areas	Learning Strategies
1st phase :- Concept of rational numbers	Teacher gives the proper definition of Rational numbers using lecture method.

C	( )	%	÷
7	8	9	×
4	5	6	−
1	2	3	+
+/-	0	.	=

TEACHING AID – Calculator shown during teaching

A number which can be written in the form of p/q where p & q are integers & $q \neq 0$ is known as Rational numbers.

Eg. $\frac{5}{2}$, $0/9$, $-2/11$ etc.

2nd phase

Types of rational numbers

Teacher explains a rational number can be positive or negative.

- Positive Rational number
  → if both p & q are positive
- Negative rational number
  → if either p or q takes the negative value

3rd phase.

Arithmatic Operations on rational numbers.

Multiplicative inverse & properties

Teacher explains the arithmatic operations on rational numbers using Demonstration method.

- Addition → $1/2 + 3/4 = \frac{2+3}{4} = \frac{5}{4}$
- Subtraction → $1/2 - 3/4 = \frac{2-3}{4} = -1/4$
- Multiplication → $\frac{1}{2} \times \frac{3}{4} = \frac{3 \times 1}{2 \times 4} = \frac{3}{8}$
- Division → $\frac{1}{2} \div \frac{3}{4} = \frac{1 \times 4}{2 \times 3} = \frac{2}{3}$

Teacher also explains the multiplicative inverse of the rational number is the reciprocal of the given fraction.

i.e Multiplicative inverse of $\frac{4}{7}$ is $\frac{7}{4}$

4th phase Explaining a problem	Teacher writes some questions on board & solves it, using discussion method through active participation of students. Problems :— a) $\frac{2}{9} + \_\_\_\_ = 0$ b) $-\frac{3}{9} \times \_\_\_\_ = 1$ c) find the value of x :— $7x = 14$ d) find the value of y $6y = 5 + y$

Design for evaluation : —

The following questions will be asked to students to evaluate their progress : -

1) What is Rational numbers ? give example (F.K.)
2) What integers ? (F.K.).
3) Is every integer a rational number ? (P.K)
4) Add : $-1/5 + (2/5 + 5/7) =$ ☐ (M.K.)

Diagnosis for remedial class : —

If there is any need of remedial class, then the teacher will arrange it accordingly.

29/11/22
Signature of Administrator

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delivered
SPal 23/11/22
Signature of school teacher

Signature of trainee teacher