

CORAMANDAL COLLEGE OF EDUCATION

Medikonduru - 522 438, Guntur Dist.

Affiliated to Acharya Nagarjuna University

20 - 20

Semester :

SCHOOL INTERNSHIP RECORD - PEDAGOGY - I

Name of the Student : Saabhagya Tena

Subject : School internship record, pedagogy - I (Mathematics)

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CERTIFICATE

This is to certify that Mr. / Mrs. / Kum Saabhaya Dena Class No. _____ Regd. No. Y25ED69036 of College of Education visited our Institution and conducted the required activities / collected the required data regarding to Internship record - Mathematics Practicum as a part of B.Ed. Course work stipulated by the Government of Andhra Pradesh and approved by Acharya Nagarjuna University.

Signature of the Concerned Teacher

Name :

Signature of the Head of the Institution

Name :

Seal :

This is to certify that Mr. / Mrs. / Kum Saabhaya Dena Class No. _____ Regd. No. _____

Y25ED69036 has completed the required activities regarding to Internship record - Mathematics Practicum towards fulfillment of B.Ed., Course work stipulated by the Government of Andhra Pradesh and approved by Acharya Nagarjuna University.

This record

Lecturer in-charge

INDEX

LESSON / PERIOD PLAN			
Sl. No.		PAGE NUMBER	Initials of the officer who supervises the lesson / period with date
1.	Finding greatest and smallest numbers of the group of numbers	1 - 5	
2.	Multiplication of positive and negative integer.	6 - 12	
3.	Division of positive and negative integer.	13 - 17	
4.	Multiplication of fractions	18 - 22	
5.	Division of fractions	23 - 26	
6.	Multiplication of decimals	27 - 30	
7.	Division of decimals numbers	31 - 34	
8.	Simple equation	35 - 38	
9.	Percentage	39 - 42	
10.	Profit and loss	42 - 44	
11.	Large number used in daily life situations	45 - 48	
12.	Divisibility by 2, 3.	49 - 51	
13.	Divisibility by 5, 10.	52 - 54	
14.	Divisibility by 6, 9.	55 - 58	
15.	Finding H.C.F of the given numbers	59 - 61	
16.	Finding L.C.M of the given numbers	62 - 64	
17.	Addition of integers	65 - 67	
18.	Subtraction of integers	68 - 70	
19.	Addition of decimals fractions	71 - 74	
20.	Subtraction of decimals fractions	75 - 76	

Lesson Plan - I
 More Teaching Lesson Plan - I

Preliminary Information

Name of the student teacher : Saubhagya Jena

Subject : Mathematics

Topic : Good and bad numbers

Unit : Finding greatest and smallest

Number of the group of numbers

Time : 45 min

Objectives : To understand the concept of good and bad numbers

Method : Lecture and discussion

Resources : Textbook, Worksheet

Aim: Understanding the content : Student will understand the concept of greatest and the smallest among the group of numbers.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction	<u>Teacher</u>: Good morning students <u>Students</u>: Good morning Sir <u>Teacher</u>: Uma and Latha have entered class VI. On the first day of the schools their math teacher discussed about the population of India our state and district according to the population counted recently. So students we are discussing about — ? <u>Students</u>: Numbers in thousands. <u>Teacher</u>: Well yes but how we will discuss about lakhs in lakhs and etc		
* Objectives of pre-concepts			

3 Steps / Content	Teaching and Learning activities	B.B.W	T.L.M
* Announcement of the topic : * Demonstration and discussion. → Reading → Keywords → Example → Activities for understanding the concept	* Children, Today we are going to learn the greatest and the smallest no. among the group of numbers as well as numbers in lakh Ten lakh etc. When two numbers are given. We should compare the ones place digit tens place digit hundred place digit thousands place digit * Largest number * Smallest number * 3845, 485, 34, 13845 Now we must compare each number with the other numbers to find out greatest and smallest	Name of the topic Greatest and the smallest numbers among the group of numbers. * Thousands * Lakh * Greatest no. * Smallest no.	Black Board

Step Steps/Content	Teaching and Learning Activities	B.B.W	T.L.M
* Discussion on the topic * Few example or questions.	* Teacher will be asking students few questions about the topic and can estimate how much they have understood the concept. Example: The no. of people who visited games village during common wealth games in New Delhi for the first four days was recorded as 151181, 14235, Find out what is the number which is greatest and smallest in total 4 days visited by the people	Solutions: No. of people visited common wealth games in New Delhi for the first four days are = 15290 14181 14235 10578 When each no. is compared with others number the greatest no. is 15290 the smallest no. is 10578	

Steps / Content	Teaching learning activities	B.B.W	T.L.M
→ Conclusion	<u>Example - 3</u> : In a village no. of men are 7450 no. of women are 3500 no. of children are 3950 Now who are more and less in population in total in the village. Students today we have seen the greatest and the smallest number of the group of numbers given. Also few questions were asked by teacher and answered by students at the end of the class.	<u>Solution</u> : No. of men = 7450 No. of women = 3500 No. of children = 3950 By comparing each number with other number we can say that men are more and women are less in population.	

Macro Teaching Lesson Plan - II

Preliminary Information: Name of the student teacher : Soubhagya Jena

Class : VI

Subject : Mathematics

Unit : Integers

Topic : Multiplication of +ve & -ve integers

Time : 45 min

Example : 3 : 4 = 12

Signature

Signature

B.B.O

A.T.M

Aim : Understanding the content is Students will be able to understand the concept of multiplication with few examples with integers.

Steps / Content	Teaching & Learning activities	B.B.W	T.L.M
<u>Introduction</u> :- * Objectives of pre-concepts	Good morning students. The numbers which are called as integers. Students: The numbers which are having positive and -ve no. are known as integers. Teachers: Good Now can we do addition & subtraction for the integers. Students: Yes we can do both. Teacher: Good Now can we do multiplication of integers.		

Steps / Content	Teaching and Learning Activities	B. B. W	T. L. M.
Announcement of the topic Demonstration and discussion	* Children Today We are going to learn the concept of multiplication with integers. * <u>Definition</u>: The +ve & -ve numbers used for multiplication is with integers. * Integers * Pattern * Number line * Multiplication 1. <u>Multiplication of two -ve integers</u> $\Rightarrow$ If we multiply two -ve integers then the product of those will be +ve number. E.g.: $(-2) \times (-3) = +6$ 2. <u>Multiplication of two +ve integers</u>: If we multiply two +ve integers	Name of the topic - Multiplication with integers. * The +ve and -ve numbers used for multiplying * Number line * Integers * Pattern * Multiplication (1) $(-2) \times (-3) = +6$	Blackboard Blackboard Multiplication tables.

Steps/Content	Teaching and Learning activities	B.B + W	T.L.M
* Discussion on the topic * Few examples or questions.	Then the product of those will be positive. Ex : $(+3) \times (+3) = +6$ * Teacher will be asking students few questions about the topic and can estimate how much students have understood. Examples : In a class test containing 10 questions 3 marks are awarded for every correct answer and (-1) mark is for every incorrect answer and 0 for not attending a) Gopi gets 5 correct and 5 incorrect answers, what is his	<u>Solution</u> : a) No. of correct answer written by Gopi = 5 Each correct answer is awarded = 3 mark. Total marks for correct answer $5 \times 3 = 15$ marks No. of incorrect answer written = 5	* Blackboard * Multiplication Tables.

Steps/Content

Teaching and Learning activities

B.B + W

T.L.M

Steps/Content	Teaching and Learning activities	B. B. V	T.L.M
Concepts of addition and subtraction of integers	1) (addition and subtraction of integers) and 2) (multiplication and division of integers) For example: $5 + 3 = 8$ and $5 - 3 = 2$ Reshma gets 7 correct answer and 3 incorrect answer What is her score? Teacher will give her 7 correct answers and 3 incorrect answers. Then the teacher will give her 7 correct answers and 3 incorrect answers.	Each incorrect answer is awarded = -1 mark Total marks = $(+7) + (-3)$ Now Overall total marks obtained by him = $7 - 3$ correct marks + incorrect marks $= 7 + (-3)$ $= 7 - 3$ $= 4$ marks. Solution (b) : 7 No of correct answer and marks given to them $= 7 \times 8 = 56$ marks	* Black board * Multiplication Table

Steps / content	Teaching and learning activities	B.B.W	T.LM
concepts steps / content	c) Rashmi gets 3 correct and 4 incorrect answer out of 7 questions she attempt, what is her score. Also find correct and incorrect answer with their marks. beginning and the end of the lesson the multiplication of positive and negative numbers. Students follow the steps given. Teaching and learning activities	No of incorrect answer and marks given to them $= 3 \times (-1) = -3 \text{ marks}$ Total marks secured by Rashmi $= 21 + (-3)$ $= 21 - 3$ $= 18 \text{ marks}$ Solution: 2) No. of correct answer and marks given to them $= 3 \times 3 = 9 \text{ marks}$ No. of incorrect answers and marks given to them $= 4 \times (-1) = -4 \text{ marks}$ Total marks secured by Rashmi $= 9 + (-4)$ $= 5 \text{ marks}$	

Steps / Content	Teaching and learning activities	B.B. (U) / A (G)	T.L.M
* Conclusions	Students today we have seen the multiplication of two positive and two negative integers with few examples. Also they were asked few questions and given few problems to solve in classroom. Q) Karpur dep 3 covered and 1	Let's think, covered and $1 \times (-1) = -1$ word No of uncovered and covered $2 \times 2 = 4$ words uncovered and covered divided to $4 \div 2 = 2$ No. of covered $18 \div 3 = 6$ $31 \div 3 = 10$ Karpur = $31 + (-3)$ $31 + (-3) = 28$ marks given to them $3 \times (-1) = -3$ words No. of uncovered covered and $3 \times 2 = 6$	

Misc Teaching Lesson Plan - III

Preliminary Information

Name of the student teacher → Saubhagya Jena

Subject :- Mathematics

Classroom :- VIII

Unit :- Integers

Topic :- Division of positive and negative integers

Time :- 45 min

App → Objectives of the lesson :-

Aim → Understanding the content :- Students will be able to understand the concept of division with few examples with integers.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of Pre-concepts * Announcement of the topic * Demonstration and discussion * Reading	Good morning children <u>Teacher</u> : Students till now we saw how to addition, subtraction and also multiplication of integers. <u>Students</u> :- Yes sir, <u>Teacher</u> :- Well students is it possible to do division of integers :- * Students today we are going to learn the concept of division with integers. * <u>Division</u> :- Division by zero :- For any integer a, $a \div 0$ is not defined but $0 \div a = 0$ for $a \neq 0$.	* Name of the topic - Division with integer. * For any integer a, $a \div 0$ is not defined but $0 \div a = 0$ for $a \neq 0$ is division by zero.	

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M
* Keywords	3. <u>Division by -1</u> : In general For any integer a, $a \div 1 = a$ and $1 \div a = a$ is divisibility $\Rightarrow$ Divide $\rightarrow$ Integer <u>Division by zero</u> : Like whole numbers any integer divided by zero is meaningless and zero divided by a non zero integer is equal to zero. * <u>Division by -1</u> : When we divide a whole no. by -1 it gives the same whole number. Ex: $-8 \div 1 = -8$ Ex: $-8 \div -1 = 8$ Ex: $-11 \div -1 = 11$	In general for any integer a, $a \div 1 = a$ is divisibility $\Rightarrow$ Divide $\rightarrow$ Integer $5 \div 0 = \text{not defined}$	Blackboard
* Activities for understanding the concept.	Ex: $-8 \div 1 = -8$ Ex: $-8 \div -1 = 8$ Ex: $-11 \div -1 = 11$	$(-8) \div 1 = -8$ $11 \div (-1) = -11$	Blackboard

Steps / Contents	Teaching and Learning activities	B.B.W	T.L.M
* Discussion on the topic * Few example in questions	* Teacher will be asking student few questions about the topic and can estimate how much students have understood. <u>Example</u> :- A shop keeper earns a profit of ₹ by selling one pen and incurs a loss of ₹40 per pencil while selling pencil of her old stock. a) In a particular month she incurs a loss of ₹51/- In this period she sold 45 pens. How many pencils did she sell in this period?	B.B.W	T.L.M

Steps / Content.	Teaching and learning activities	B.B.W	T.L.M
<u>Conclusions:</u>	(b) In the next month she earns neither profit nor loss, if she sold 70 pens how many pencils did she sell? Students today we have seen the decision with few examples also they were asked few questions and given few problems to solve in Classroom.	<u>Solution:</u> In the next month there is neither profit nor loss. So the profit earned + loss incurred = 0 i.e. Profit earned = - loss increased Now profit earned by selling 70 pens = 70 Hence loss incurred by selling pencils = -70 Total number of pencils sold = $(-7000) \div (-40)$	

Where teaching Lesson Plan - IV

Preliminary Information

Name of the student teacher : Saubhagya Jena

Subject : Mathematics

Class : VII

Unit : Fraction, Decimals

Topic : Multiplication of

Time : 45 min.

Date : _____

Signature and stamp of teacher

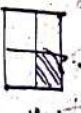
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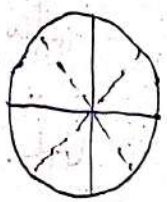
Part - _____

Aim

Understanding the content : Student will be able to understand concept of multiplication of fraction with few example.

Steps / Content .	Multiplication Teaching & Learning Activities	B.B.W	T.L.M
* Introduction * Objectives of Pre - concepts * Announcement of the topic . * Demonstration and discussion. → Reading	Good morning students . <u>Teacher</u> : Students till now , we saw addition and subtraction of fraction in the previous classes and well is it possible to do multiplication of fraction . <u>Students</u> : * Today we are going to learn the concept of multiplication of fraction . * To represent multiplication of fraction we use . * <u>Product of numerators</u> → <u>Product of denominators</u> .	* Name of the topic : Multiplication of fraction . <u>Product of numerators</u> <u>Product of denominators</u>	

Step / Content	Teaching and Learning Activities	B.B.W	T.L.M
<u>Keywords</u> * Activities for understanding the concept.	* <u>Fraction</u> * <u>Denominators</u> * <u>Numerators</u> * <u>Multiplication of a fraction by a whole number</u> : When we multiply whole numbers we know we are repeatedly adding a number. Thus when we say $2 \times \frac{1}{4}$ it means adding $\frac{1}{4}$ twice or 2 times $\frac{1}{4}$. <u>Multiplication of a fraction with a fraction</u> : There are two images, they are represented as $\frac{1}{2}$ of $\frac{1}{4}$. Now, when we divide the first picture remaining parts into two equal parts then we get total of 8 equal parts.	* <u>Fraction</u> * <u>Denominator</u> * <u>Numerator</u> * When we add $\frac{1}{4}$ four times or $\frac{1}{4}$ four times we say $2 \times \frac{1}{4}$  +  = 	* Blackboard * Maths lab * Smart board

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
	So it is $\frac{1}{8}$ of the whole. Thus $\frac{1}{2}$ of $\frac{1}{4} = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ * Teacher will be asking students few questions about the topic and can estimate how much students have understood. <u>Example</u> Narendra reads $\frac{1}{4}$ of a short novel in 1 hour. What part of the book will he have read in $2\frac{1}{2}$ hours	 <u>Solution</u> The part of the novel read by Narendra in 1 hour = $\frac{1}{4}$ So the part of the novel read by him in $2\frac{1}{2}$ hr $= 2\frac{1}{2} \times \frac{1}{4}$ $= \frac{5}{2} \times \frac{1}{4}$ $= \frac{5}{8}$	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
Steps / Content	b) How many chapattis were eaten by the children? c) What fraction of the total chapattis has been eaten by the father. Students today are to have seen the multiplication of fractions with few examples. Also student were asked few questions regarding the concept and given few problems to solve.	b) Solution: $\frac{3}{5}$ of the total number is eaten by children $= \frac{3}{5} \times 15$ $= 9$ Chapattis c) Solution: The chapatti left for father are $= 15 - 9 = 6$ $= 3$ Chapattis Fraction of Chapattis eaten by father $= \frac{3}{15} = \frac{1}{5}$	T.L.M

Conclusion

Teaching and learning activities

Master Teaching Lesson Plan - V

Preliminary Information:

Name of the student teacher : Saubhagya Jena

Subject : Mathematics

Class : VII

Unit : Fractions, Decimals and rational number

Topic : Division of fraction

Time : 45 min.

Objectives : To understand the concept of division of fraction and its application in real life.

Learning and teaching activities

or division of fraction with two examples

Notes:

Aim:

Understanding the content :- Students will be able to understand the concept of division of fractions with few examples.

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre concepts * Announcement of the topic	Good morning children. <u>Teacher</u>: Students we have the knowledge of fractions and also multiplication of fraction. Well students is it possible to do division of fraction. <u>Student</u> - - - - - * Children we are going to learn the concept of division of fractions.	Name of the topic Division of fraction	

Steps / Contents	Teaching and Learning activities	B.B.O	T.L.M
* Demonstration and discussion * Reading * Keywords * Activities for understanding the concept.	* While dividing a whole number with a fraction we multiply the whole number with the reciprocal of that fraction. Ex: $3 \div \frac{1}{2} = 6$ * Reciprocal * Divisible * Division of whole numbers by a fraction When we divide a whole number with a fraction we get $\frac{1}{2} \div 3 = \frac{1}{6}$ - Division of reciprocal of a fraction Dividing by a fraction is equivalent to multiplying the number by the reciprocal of that fraction.	$3 \div \frac{1}{2} = \frac{1}{6}$ * Reciprocal * Divisible * $\frac{1}{2} \div 3 = \frac{1}{6}$ $\Rightarrow 3 \div \frac{1}{4}$ $= 3 \times \frac{4}{1}$ $= 12$	Black board

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Find example Questions	<u>Example</u>: An empty swimming pool is to be filled up to $\frac{9}{11}$ of its capacity. A pump takes half an hour to fill $\frac{3}{10}$ of the pool, how long will it take to fill $\frac{9}{10}$ of the pool? Students today we have seen the division of fraction with few example. Also they were asked few questions and given problems to solve in classroom	<u>Solution</u>: We need to find how many $\frac{3}{10}$ is are there in $\frac{9}{10}$ $\Rightarrow \frac{9}{10} \div \frac{3}{10}$ $= \frac{9}{10} \times \frac{10}{3}$ $= \frac{9}{3} = 3$ Thus it would take 3 half an hour or $1\frac{1}{2}$ hours to fill the pool to its $\frac{9}{10}$	

Master Teaching Lesson plan - VI

Preliminary Information:

Name of the student teacher: Saubhagya Jena

Subject: Mathematics

Class: VII

Unit: Fraction Decimals and rational numbers

Topic: Multiplication of decimals number or fraction

Time: 45 min

Learning Objectives	Learning and teaching activities
- Understand the concept of multiplication of decimal numbers - Apply the concept of multiplication of decimal numbers in real life situations	- Teacher will explain the concept of multiplication of decimal numbers with the help of examples - Students will be asked to solve some problems on their own - Teacher will monitor the progress of students

Aim : Understanding the content : Students will be able to understand the concept of multiplication of decimal numbers with few examples.

Steps / Content	Teaching and learning activities	B. B. D	T. L. M
Introduction * Objectives of pre-concepts * Announcement of the topic.	Good morning students Students till now we saw how to do addition and subtraction using decimal number Students : Yes sir, Teacher : Well is it possible to do multiplication using decimal number. * Today we are going to learn the concept of multiplication using decimal numbers.	* Name of the Topic : Multiplication using decimal no.	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M.
* Demonstration and discussion * Reading * Activities for understanding the concept.	A decimal number is a number with a decimal point in it like: 1.5, 1.6 etc. The number to the left of the decimal is an ordinary whole number. The first number to the right of the decimal is the number of tenths ($\frac{1}{10}$'s) etc. <u>Multiplication of decimal numbers</u> While finding 0.1×0.1 For 0.4×0.2 we should notice that first multiply then as whole number ignoring the decimal points. In 0.1 and 0.1 we find $0.1 \times 0.1 = 1$ or $1 \times 1 = 1$	$\Rightarrow$ 1.5 0.6 3.14 are decimal number * Take 0.1 and 0.1 $\Rightarrow 0.1 \times 0.1$ 1 1 $\Rightarrow 1$	

Steps / Content	Teaching and Learning activities	B.B.W	T-L-M
* Discussion on the topic * Few examples on questions.	Similarly in 0.4×0.2 we found 0.4×0.2 we found 0.4×0.2 or $4 \times 2 = 8$ The products obtained are 1 and 8 respectively. * Teacher will be asking students few questions to estimate their knowledge on this topic. <u>Examples</u>: The length of a rectangle is 7.1 cm and its breadth is 2.5 cm what is the area of the rectangle? <u>Examples-2</u>: Solve 0.3×6 students today we have seen the multiplication of decimal numbers with few examples. Also they were asked few questions and given few problem	$= 0.4 \times 0.2$ $= 0.4 \times 0.2$ or $4 \times 2 = 8$ Ans = 1 and 8 respectively <u>Soln-1</u> length of the rectangle $= 7.1 \text{ cm}$ breadth $= 2.5 \text{ cm}$ $\therefore \text{Area} = 7.1 \times 2.5$ $= 17.75$ <u>Solution</u> 0.3×6 $= 1.8$	

Master teaching Lesson plan - VII

Preliminary Information:

Name of the students - teacher - Saadhya Tena

Subject : Mathematics

Class : VII

Unit : Fraction, decimals and rational number

Topic : Division of decimal numbers.

Time : 45 min.

Learning objectives

At the end of the lesson, the students will be able to

divide decimal numbers by a decimal number.

Aim: Understanding the content: Students will be able to understand the concept of division of decimal number with few examples.

Steps / Content:	Teaching and Learning activities	B.B.W	T.L.M.
Introduction. * Objectives of pre concept. * Announcement of topic. * Demonstration and discussion. * Reading	Hi students how are you all students till now we saw how to do addition, subtraction and multiplication using decimals numbers Now is it possible to do division using decimal numbers. * Today we will discuss the new topic called division. * A decimal number is a number with a decimal point in it like 1.5, 0.6, 3.14 etc. The number to the left	B.B.W	T.L.M.

Name of the topic - Division using decimal numbers.

Steps / Content.	Teaching and learning activities	B.B.W	T.L.M
Definity for understanding concept.	of the decimal is an ordinary whole number the first number to the right of the decimal is the number of lengths ($\frac{1}{10}$)s and so on. <u>Division of a decimal number by a whole number</u> Let us find $\frac{6.4}{2}$ remember we also write it as $6.4 \div 2$ Ex: $6.4 \div 2 = \frac{6.4}{10} \times \frac{1}{2}$ So we can write $6.4 \div 2 = \frac{64}{10} \times \frac{1}{2}$	7 1.5, 0.6 3.14 are decimal number * $\frac{6.4}{2}$ is also written as $6.4 \div 2$ $6.4 \div 2 = \frac{64}{10} \div 2$ $= \frac{64}{10} \times \frac{1}{2}$ $\frac{64 \times 1}{10 \times 2} = \frac{1}{10} \times \frac{64}{2}$ $= \frac{1}{10} \times 32$ $= \frac{32}{10} = 3.2$	

Steps / Contents.	Teaching and learning activities	B. B. W	T. L. M
Discussion on the topic * Few examples on questions. * Conclusion.	* Teacher will be asking students few questions to estimate their knowledge on this topic. Ex: A truck covers a distance of 92.5 km in 2.5 hours if the truck is travelling at the speed through out the journey what is the distance covered by it in 1 hr. Ex: 2 Find $0.5 \times 10 = ?$. Students today we have seen the division of decimals numbers with few examples, Also they were asked few questions and given few problems to solve in classroom.	<u>Solution:</u> Distance travelled by truck = 92.5 Time required to travel 2.5 hrs. So distance travelled by it in 1 hr = $\frac{92.5}{2.5}$ $= \frac{925}{25} = 37 \text{ km}$ <u>Solution:</u> 0.5×10 $= \frac{5}{10} \times 10$ $= 5$	

Master Teaching Lesson plan - VIII
Preliminary Information :

1) Curriculum : Name of the student teacher - Saubhagya Tena

2) Add the name of the subject : Mathematics

3) For preparing an educational work : VII

4) For preparing a lesson plan : Simple Equation

Topic : Simple Equation

Time : 75 min.

5) For preparing a lesson plan : Simple Equation

6) For preparing a lesson plan : Simple Equation

7) For preparing a lesson plan : Simple Equation

Aim: Understanding the content: Students will be able to understand the concept of simple equation with few examples.

Steps / Content.	Teaching and learning activities.	(B.B.W)	T.L.M
* Introduction. * Objectives of pre concepts. * Announcement of the topic * Demonstration and discussion → Reading	Good morning, students Students you have seen how some equations help us in solving puzzles and daily life problems. We are going to learn about simple equation. * For balancing an equation we 1) Add the same number on both the sides (or) 2) Subtract the same number from both the sides (or) 3) Multiply both sides with the same number.	Name of the topic - Simple equation.	

Steps / Content.	Teaching and learning activities	(B.B.W)	T.L.M
* Activities for understanding the concept. * Discussion on the topic. * Few equation or (questions)	What will happen if the left pan of weighing balance holds 5 kg and the right pan holds 2 kg? * What will happen if the left and right pans holds 3 kgs of weights. * Teacher will be asking students few questions to estimate their knowledge on this topic Examples: Solve $5x = -30$	A weighing balance needs to have equal weights on both sides to be perfectly balanced <u>Solution:</u> $5x = -30$ $\frac{5x}{5} = \frac{-30}{5}$ dividing both side by 5 $x = \frac{-30}{5}$ $x = -6$	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
<u>Conclusion:</u>	Example - 2 Solve $\frac{x}{6} = -3$ Students today we have seen the concept of simple equation with few examples. Also they were asked few questions and given few problems to solve in classroom.	<u>Solution</u> :- $\frac{x}{6} = -3 \quad \text{--- (1)}$ $6 \left(\frac{x}{6} \right) = 6 \times (-3)$ Multiplying both sides by 6 $\frac{x}{6} = 6 \times (-3)$ $x = 6 \times (-3)$ $x = -18$	

Macro Teaching Lesson Plan - IX

Preliminary Information :-

Name of the student teacher - Saubhagya Jena

Subject : Mathematics

Class : VIII

Unit : Ratio, application

Topic : Percentage

Time : 45 min

Learning and teaching objectives

P.B.O

L.T.M

Learning and teaching objectives

Learning and teaching objectives

Aim Understanding the content : Students will be able to concept of percentage with few examples .

Steps / Contents	Teaching and Learning activities	B.B.W	T.L.M
<u>Introduction</u> * Objectives of pre-concepts * Announcement of the topic . * Demonstration and discussion * Reading	Good morning students . * Children we you will get your exam results many will be asking what is your percentage ? and also what is your grade ? Now do you any one know how to calculate the percentage of any given numbers and also on what basis . * We are going to learn about new topic called percentage . * The word percent means per every hundred or for a hundred , the symbol % is used to present percentage .	* Name of the topic - Percentage * Symbol of percentage is %	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
Discussion on the topic Few examples and questions <u>Conclusion</u> :	Teacher will be asking students few questions to estimate their knowledge on this topic. <u>Ex</u>: Shirt A has $\frac{3}{5}$ cotton where shirt B has $\frac{3}{4}$ cotton. a) What is the percentage of cotton in each shirt. b) Which shirt has more percentage of cotton. Students today we have seen the percentage with few examples. Also they were asked few questions and given few problems to solve in classroom. Prepared Handwritten: Mean, Median, Mode, Range, Standard Deviation	<u>Solution</u>: The percentage of cotton in shirt A $= \frac{3}{5} \times 100 = 60\%$ The percentage of shirt B $= \frac{3}{4} \times 100 = 75\%$ "∴ Shirt B has more percentage of cotton."	

Master Teaching Lesson Plan - X

Preliminary Information:

Name of the student teacher - Saubhagya Jena

Subject and: Mathematics

Class: VII

Unit: Ratio - Application -

Topic: Profit and loss.

Time: 45 min

Aim : Understanding the content : Students will be able to understand the concept of profit and loss and with year examples.

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M
Introduction * Objectives of pre-concepts * Announcement of the topic. * Demonstration and discussion. * Reading * Activities for understanding the concept.	* Good morning children. * Till now, we have learned about percentage ratio and many more. * We are going to learn about profits & loss. * Generally the term profit and loss is used in business. * A toy motor moves a toy for 50 and sells it for 75 does he make profit and loss? * These type of questions were asked.	Name of the topic - Profit and loss.	

Steps / Content.	Teaching and Learning activities	B.B.W	T.L.M
* Discussion on topic * Few examples	Teacher will be asked student few question to estimate their knowledge in this topic. Examples: A man sold two cycles for 3000 each gaining 20% on one and losing 20% on the other find his gain or loss percentage on the whole transaction. Students today we have seen the profit and loss with few examples. Also students were asked few questions and given few examples problems to solve in classroom.	<u>Solution</u>: Gain or loss in 1st cycle = 20% loss on 2nd = 20% $SP = 100 + 20 = 120$ Thus the SP is 120 then $CP = \frac{100}{80}$ Now if SP is 3000 then $CP = \frac{100}{80} \times 3000 = 3750$ For the 2nd cycle SP = 100 - 20 = 80 $CP = 100$ Now SP is Rs 1 $CP = \frac{100}{80}$ $SP = 3000$ then $CP =$ $\frac{100}{80} \times 3000 = 3750$ Total CP = 2500 + 3750 = 6250 Loss = 6250 - 6000 Loss % = $\frac{250}{6250} \times 100$ = 4%	

Maero Teaching Lesson plan - XI

Preliminary Information

need to find the Name of the student teacher : Saubhagya Jena

Subject : Mathematics

Class : VII

Unit : Knowing our numbers

Topic : Large numbers used in daily life situations

Time : 45 min

Prepared and reviewed by : B. B. S. J. S. M.

Goal : Understanding the concept of Numbers will be able to understand how to

Aim : Understanding the content : Students will be able to understand how to use large number in daily life situations.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre concepts. * Announcement of the topic * Demonstration and discussion * Readings	Good morning students. We know that we use metre (m) as unit of length kilogram (kg) as unit of weight and litre (l) as unit of volume and second as a unit of time. Now students to measure the thickness of paper we can not use we can't use big units to measure and viceversa. * We are going to discuss large numbers used in daily life situations. 1000 millimeters = 1 centimeters. 100 centimeters = 1 meter 1000 meter = 1 kilometer	* Name of the topic - large number used in daily life situation 10 mm = 1 cm 100 cm = 1 m 1000 m = 1 km	

Steps / Content :	Teaching and learning activities	U.B.B.W	T.L.M
* Keywords * Activities for understanding the concept. * Discussion on the topic. * Few examples or (questions)	* Centimeters * Millimeters * Kilometers * Second * We buy rice or wheat in kgs. But items like spices, chillipowder, Haldi etc, which we do not need in large quantities are brought in grams (g). * Teacher will be asking student few questions to estimate their knowledge on this topic - Ex.1: A hotel has 15 litres milk. 2 ml. of milk is required to prepare a cup of tea. How many cups of tea can be made with the milk.	* Second * Litre * Kilometer * Millimeter * Centimeter	* Blackboard * Math lab. * Smart board.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
<u>Conclusion:</u>	<u>Ex:3</u> Tendulkar is a famous cricketer player. He has so far scored 15030 runs in test matches and 18,111 runs in one day cricket. What is the total number of runs scored by him in both type of matches. Students today we learnt about large numbers which were used in our daily life situations.	<u>Solution:</u> Quantity of milk in the hotel = 15 ltr. $= 15 \times 1000$ $= 15000 \text{ ml.}$ Since 25 ml. of milk is required for each cup of tea no of cups of tea that can be made = $15000 \div 25$ $= 600 \text{ cups.}$ <u>Solution:</u> Runs scored by Tendulkar = 15030 Runs scored in one day match = 18,111 Total runs = 15030 $+ 18111$ 33 141	

Master Teaching Lesson Plan - XII

Preliminary Information

Name of the student - teacher : Saunhagya Jena

Subject : Mathematics

Class : VI

Topic : Playing with numbers

Time : Divisibility by 2, 3

45 min.

Aim : Understanding the content : Students will be able to understand the concept of divisibility by 2 and 3 with few examples.

Steps / Content	Teaching and learning activities	B.B.W	T.C.M.
* Introduction * Objectives of pre-concept * Announcement of the topic. * Demonstration discussion * Reading	Good morning students. * Children, The process of checking whether a number is divisible by another number when it leaves zero as remainder is called <u>Divisibility</u> by a given number or not without actual division is called <u>divisibility rule</u> for that number. * We are going to discuss about <u>Divisibility by 2 and 3</u> : By 2 : A number is divisible by 2 if it has any of the digits 0, 2, 4, 6, 8 in its ones place.	* Name of the topic - Divisibility by 2 and 3 - eg : 9534 22, 34, 76 etc.	* Black board

Steps / Content	Teaching and learning activities	B.B.W	T.L.M.
* Few examples <u>Conclusion</u>:	<u>Ex</u>: Whether 321729 is divisible by 3. Students today we have seen the divisibility by two and three numbers rules of those with few examples.	<u>Solution</u>: Take number = 321729 Now add all the digits = $3+2+1+7+2+9$ $+9 = 24$ Now check whether 24 is divisible by 3 or not $3 \text{ or not } 3+4 = 6$ So, now check 6 is divisible by 3 or not. Yes is divisible by 3 with remainder as zero So 321729 is also divisible by 3.	

Macro Teaching Lesson Plan - XIII

Preliminary Information:

Name of the student teacher : Saubhagya Jena

Subject : Mathematics

Class : VI

Unit : Playing with numbers.

Topic : Divisibility by 5 and 10

Time : 45 min.

Ex: copy pasted or otherwise in 3

Assessment and learning activities

100%

Aim : Understanding the content : Students will be able to understand the concept of divisibility by 5 and 10 few example .

Steps / Content .	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre concept * Announcement of the topic * Demonstration and discussion * Reading	Good morning children * Children we have already checked whether the given number is divisible by 2 & 3 * We are going to discuss about divisibility by 5 and 10 . Divisibility by 5 : The number which are having their last digit 5 and 10 are divisible by 5 Divisibility by 10 : The number which are having their last digit as 0 are divisible by 10 .	* Name of the topic - Divisible by 5 * 10, 15, 25 100 etc * 10, 20, 30 100, 200	

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M.
Activities for understanding the concept. <u>Real examples:</u>	* Let us consider 29. When you check the last digit it is a neither 0 or 5 which says that the number 29 is not divided by 5. Numbers 5785 are divisible by 5 and 10.	$\begin{array}{r} 29 \\ 5 \overline{) 29} \end{array}$ ⇒ Remainder is 4 which is not equal to 0 so not divisible by 5. 5785, the last digit is 5 which is divisible by 5 but not 10.	
<u>Conclusion:</u>	Students today we have seen the number divisible of 5 and 10 numbers. Rules of those with real examples.		

Macro Teaching Lesson Plan - XIV

Preliminary Information:

Name of the student teacher: Saahyaga Jena

Subject: Mathematics

Class: VI

Topic: Playing with numbers

Divisibility by 9, 6

Time: 45 min

Aim: Understanding the content : Students will be able to understand the concept of divisibility by 6 and 9 with few examples.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre concept * Announcement of the topic. * Demonstration of discussion * Reading	Good morning, student. * Children we have already checked whether the given number is divisible by 6 and 9 or not. * We are going to discuss about divisibility by 6 and 9. <u>Divisibility by 6</u> : If the given number is divisible by both 2 and 3 then the number is divisible by 6. <u>Divisible by 9</u> : If the given number is added then the answer is divisible by 9 then the number is divisible by 9.	Name of the topic <u>Divisibility by 6 & 9</u> Given number is 18 then it is divisible by 2 and 3 then the number is divisible by 6. Given sum is $18 = 1 + 8 = 9$ So 18 is divisible by 9.	

Steps / Content.	Teaching and learning activities	B.B.W	T.L.M.
Activities for understanding the concept. * Discussion on topic * Few examples (on) Questions	* If a number is divisible by both 2 & 3 then it is also divisible by 6. * If a number is divisible by 9, the sum of the digits of the number is divisible by 9. * Teacher will be asking students few questions to estimate their knowledge on the topic. Eg-1 : Check whether 24 is divisible by 6 or not?	ex: The given no. is divisible by 2 and 3 hence it is also divisible by 6. Ex: 18, This is divisible by 9 with remainder 0. But $18 = 1 \times 9 = 9$ Hence this is also divisible by 9. Ex: Solution: The number is 24. The last digit is 4 which is divisible by 2. The sum of digit.	

Steps / Content	Teaching and learning activities	B.B.W	T.C.M
<u>Conclusion</u> ;	Ex: 3 Check whether the number 18 is divisible by 9 or not. Q: 1. Check whether 18 is divisible by 9. Students today we have seen the divisibility of 6 and 9 no. Rules of those with few examples.	<u>Solution</u> : The no. = 18 The sum is $1+8=9$ Hence the no. 18 is divisible by 9.	

Master Teaching Lesson Plan - XV

Preliminary Information:

Name of the student teacher: Saubhagya Jena

Subject: Mathematics

Class: VI

Unit: Playing with numbers.

Topic: Finding HCF

Time: 45 min.

Goal: Students should be able to find the HCF of two numbers.

Learning Objectives: By the end of the lesson, students should be able to find the HCF of two numbers.

Content: Factors, Multiples, HCF, LCM, Division Method, Prime Factorization Method.

Aim: Understanding the content: Students will be able to understand the concept of H.C.F with few examples.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre-concept * Announcement of the topic. * Demonstration and discussion. → Reading * Activities for understanding the concept.	Good morning children. Till now we have learned the factors of number but is it possible to have same factor for both number. * Today we are going to learn the HCF of the given number. * The highest common factors (HCF) of two or more given number is the highest of their common factors. * Number is 12. - The factors of the number are → * Number = 18 - The factors of number are →	* Name of the topic - HCF of the given number. No. = 12 and 18 $\Rightarrow$ 1, 2, 3, 4, 6, 12 Number = 18 $\Rightarrow$ 1, 2, 3, 6, 9, 18	

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M.
Discussion on the topic * Few examples	Teacher will be asking students few questions to estimate their knowledge on this topic. The H.C.F of 12, 30 and 36 are	Soln: $12 = 2 \times 2 \times 3$ Factors of 30 $30 = 2 \times 3 \times 5$ Factors of 36 $36 = 3 \times 3 \times 2 \times 2$ Common factor = 2×3 Hence H.C.F of 12, 30, 36 is <u>6</u>.	
Conclusion:	Students today we have seen the H.C.F of given numbers.		

Macro Teaching Lesson Plan - XVI

Preliminary Information :

Name of the student teacher → Saubhagya Jena

Subject → Mathematics

Class → VI

Unit → Playing with number

Topic → LCM of the given number

Time → 45 min.

Aim: Understanding the content: Students will be able to understand the concept of LCM with few examples.

Steps / Content.	Teaching and learning activities	B.B.W	T.L.N1
* Introduction * Objectives of pre-concept * Announcement of the topic. * Demonstration and discussion. → Reading * Activities for understanding the concept.	Good morning students. * We have learnt the HCF of given number. Is it possible to have least factors for both numbers. * We are going to learn the LCM of the given numbers. * The lowest common multiple (LCM) of two (or) more given numbers is the lowest of their common multiple. The numbers are 12 and 15. The factors of 12 are The factors of 15 are	B.B.W * Name of the topic LCM of the given numbers. Factors of 12 are $2 \overline{) 12}$ $2 \overline{) 12}$ $12 = 2 \times 2 \times 3$ Factors of 15 are $3 \overline{) 15}$ $3 \overline{) 15}$ $15 = 3 \times 5$	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
Discussion on the topic. Feed examples (or) questions.	Teacher will be asking students few questions to estimate their knowledge on this topic. <u>Ex:</u> Two bells ring together. If the bells ring at every 3 mins and 4 mins respectively. After what interval of time will they ring together again? * Students today we have seen the LCM of given numbers with few examples.	B.B.W are $2 \times 2 \times 5 = 20$ <u>Solution</u> :- First bell rings at 3 min. i.e 6, 9, 12, 15, 18 Second bell rings at 4 min. i.e 8, 12, 16, 20 24 — L.C.M is — Both bells ring together at 12 min. 24 min. LCM is 12 min.	
Conclusion			

Macro Teaching Lesson Plan - XVII

Preliminary Information :

Name of the student teacher - Saubhagya Jena

Subject - Mathematics

Class - VI

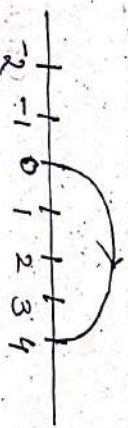
Unit - Integers

Topic - Addition of integers

Time - 45 min

Hint 3 Understanding the content : Will be able to understand the concept of addition of integers with few examples.

Steps / Content	Teaching and learning activities	B.B.W	T.L.N.
* Introduction * Objectives of pre concept * Announcement of the topic * Demonstration and discussion. → Reading	Good morning children. Children we have used 1, 2, 3, 4 and even 0 also but do we have any negative numbers. If yes then what do we call them. * We are going to learn the concept of addition of integer. * <u>Integers</u> : The collection of all the positive numbers $\{1, 2, 3, \dots\}$ and zero. Put together they are called as integer. ✓ <u>Learn</u> Learning from B.B.W	Name of the topic Addition of integers Integers $= \{1, 2, 3, \dots, 0, -1, -2, -3, \dots\}$	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M.
* Activities for understanding the concept. * Discussion (on) the topic. * Few examples;	* Counting the numbers $(+6) + (-2)$ Teacher will be asking students few questions about the topic and can estimate how much students have understood. Ex: Find the sum of $(-20) + (-82) + (-28) + (-14)$ Find the sum of $25 + (-21) + (-20) + (+17) + (-1)$ Students today we have seen the addition of integers with few examples.	$\Rightarrow (+6) + (-2)$ $\Rightarrow +6 - 2$ $\Rightarrow +4$  $\Rightarrow 25 - 21 - 20 + 17 - 1$ $= 42 - 42$ $= 0$	

Macro Teaching Lesson Plan - XVIII

Preliminary Information :

Name of the student teacher - Saubhagya Jena

Subject - Mathematics

Class - M

Unit - Integers

Topic - Subtraction of Integer

Time - 45 min

Aim :- Understanding the content : Student will be able to understand the concept of subtraction of integers with few examples.

Steps / Content	Teaching and learning activities	B.B.W	T.L.M
* Introduction * Objectives of pre-concept * Announcement of the topic. * Demonstration and discussion → Reading	Good morning students. Children we have learn addition of integers in last classes. Now is it possible to do subtraction of integers.. * We are going to learn the concept of subtraction of integers. <u>Integers</u> : The collection of all the +ve, 0 and -ve number and zero are called as integers.	Name of the topic: Subtraction of integer. * { 0, 1, 2, 3, ..., -3, -2, -1 } are called integer	

Steps / Content.	Teaching and learning activities	B.B.W	T.L.M
Activities for understanding the concept. * Discussion on the topic. * Few examples	* Subtraction of the given numbers. $(+6) - (-5) =$ * Teacher will be asking students few questions about the topic and can estimate how much student have understood. Ex: Subtract (-6) from (-13) Ex: Simplify $(-6) - (+7) - (-24)$	$\Rightarrow (+6) - (-5)$ $= 6 + 5$ $= 11$ Soln: $-13 - (-6)$ $\Rightarrow -13 + 6$ $\Rightarrow -7$ Soln: $-6 - 7 + 24$ $\Rightarrow -13 + 24$ $\Rightarrow 11$	
Conclusion:	Student today we have seen the subtraction of integer with few examples.		

Macro Teaching Lesson Plan - XIX

Preliminary Information :-

Name of the student teacher - Saubhagya Sena

Subject - Mathematics

Class - VI

Unit - Fractions and decimals

Topic - Addition of decimals fractions

Duration of lesson - 45 min.

Objectives of the lesson :-

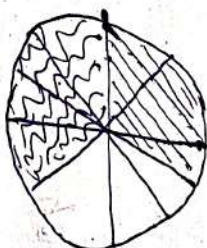
Learning and learning objectives

at the end of the lesson students will be able to

addition of decimals fractions

Aim : Understanding the concept : Student will be able to understand the concept of addition of decimals fractions with examples .

Steps / Content	Teaching and learning activities	B.B.W	T.L.N
* Introduction * Objectives of pre concept * Announcement of the topic. * Demonstration and discussion. * Reading.	Good morning students. Children we have seen fractions and also whole number even integers till now but do we have any other type of numbers . * Today we are going to learn about addition of decimals . <u>Decimal</u> : A decimal number is a number with a decimal point in it. like 1.5, 0.6 The number to the left of the decimal is an ordinary whole number. The first number to the right of decimal is the number of tenth and etc	Name of the topic: Addition of decimals fractions.	

Steps / Content	Teaching and learning activities	B.B.W	T.L.M.
Activities to understanding the concept. Discussion on the topic	<u>Addition of decimals</u>; Add 0.3 and 0.4 → Shade 3 equal parts to represent as 0.3. → Now shade equal parts to represent as 0.4 Now count the total no. of shaded tenths in the circle. $0.3 + 0.4 = 0.7$ Teacher will be asking students few questions about the topic and can estimate how much did they understand.	 $\begin{array}{r} 0.3 \\ + 0.4 \\ \hline 0.7 \end{array}$	

Steps / Content	Teaching and Learning activities	B.B.W	T.L.M
Find examples: Conclusion:	Add $3.64 + 5.4$ Students today we have seen the concept of addition of decimals fractions with few examples.	B.B.W	T.L.M
	Method: $\begin{array}{r} 3.64 + 5.4 \\ 3.64 \\ + 5.40 \\ \hline 9.04 \end{array}$ Convert 5.4 to 5.40 	B.B.W	T.L.M

Macro Teaching Lesson Plan - xx

Preliminary Information:

Name of the student teacher ; Saubhagya Jena

Subject : Mathematics

Class : VI

Unit : Fractions and decimals.

Topic : Subtraction of decimals.

Time : 45 min

Steps / Content.	Teaching and Learning activities	B.B.O	T.L.M
Activities for understanding the concept.	Subtraction of decimal fraction (or) number. * Subtract 3.57 and 2.25 Teacher will be asking students few questions about the topic and can estimate how much did they understand. Ex: Subtract 1.23 from 2.85	The number are $\begin{array}{r} 3.57 \\ - 2.25 \\ \hline 1.32 \end{array}$	
* Discussion on the topic.		Solution $\begin{array}{r} 2.85 \\ - 1.23 \\ \hline 1.62 \end{array}$ Thus 2.85 - 1.23 = 1.62	
* Few examples:			
<u>Conclusion</u>:	Students today we have seen the concept of subtraction of decimal fractions (or) number.		