

LESSON PLAN 2

CLASS : 7 TEACHER'S NAME :

NAME OF THE UNIT	SUB-TOPICS	NO OF PERIODS REQUIRED			Time line for teaching	
		Teaching	Practice	TOTAL	From	To
FRACTIONS AND DECIMALS	2.1 MULTIPLICATION OF FRACTIONS	1	3	4		
	2.1.1 MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER					
	2.1.2 MULTIPLICATION OF A FRACTION BY A FRACTION					
	2.2 DIVISION OF FRACTIONS	1	4	5		
	2.2.1 DIVISION OF WHOLE NUMBER BY A FRACTION					
	2.2.2 DIVISION OF FRACTION BY A WHOLE NUMBER					
	2.2.3 DIVISION OF FRACTION BY AN ANOTHER FRACTION					
	2.3 MULTIPLICATION OF DECIMAL NUMBERS	1	3	4		
	2.3.1 MULTIPLICATION OF DECIMAL NUMBERS BY 10,100 AND 1000					
	2.4 DIVISION OF DECIMAL NUMBERS	1	5	6		
2.4.1 DIVISION BY 10,100 AND 1000						
2.4.2 DIVISION OF A DECIMAL NUMBER BY A WHOLE NUMBER						
2.4.3 DIVISION OF A DECIMAL NUMBER BY ANOTHER DECIMAL NUMBER						
TOTAL	4	15	19			
	KEY CONEPTS	KEY VOCABULARY				
PRE-REQUISITES	Every Pupil is expected to have basic knowledge in # Natural Numbers, Whole Numbers and Integers # Decimals, Fractions, Proper fraction, Improper fraction, Mixed fraction # Addition and Subtraction of fractions # four basic operations like +, -, x and ÷	# Integers # Natural Numbers # Whole Numbers # Fractions # Decimals			# addition # Subtraction # Multiplication # Division	

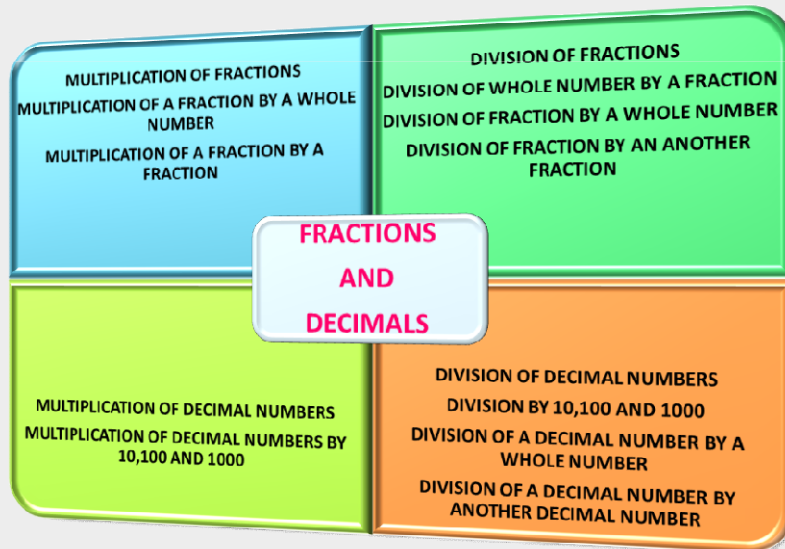
Learning Outcomes

After Completion of this lesson every student will be able to

- # multiply any given fraction with any whole number or a fraction
- # Divide any given fraction with any whole number or another fraction
- # Multiply and Divide any decimal number with whole number or another decimal number
- # recognize the significance and appreciate the importance of fractions and decimal numbers in real life situations.

Teaching Learning Process

MIND MAPPING



Experience & Reflection

Pupils will recollect their knowledge on fractions and decimals that they were acquainted with in their previous class and will reflect the knowledge here in exploring some more operations beyond addition and subtraction in this chapter/

Students will experience the usage of fractions and decimals in real life situations.

TEACHING PERIOD : 1	MULTIPLICATION OF FRACTIONS, MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER, MULTIPLICATION OF A FRACTION BY A FRACTION		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS & PRE REQUISITES	Brain storming session involving children with pre-requisites vocabulary and concepts related to previous knowledge. Introduction of new vocabulary and key words associated with the concept # NATURAL NUMBERS # WHOLE NUMBERS # INTEGERS # FRACTIONS # MULTIPLICATION # NUMERATOR # DENOMINATOR # VINCULUM # DIVISION	* Students read the pre-requisites and answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
MIND MAPPING	Teacher writes the key word " FRACTIONS AND DECIMALS" on the black board and will elicit its other related words through questioning and will draw pupils' attention towards key concepts in the lesson	Hetrogeneous groups are created. One group will read the words and other will explain the meaning	Pupils individually read the keywords associated with Integers
CONCEPTUAL UNDERSTANDING	Teacher presents the concept of multiplication of fractions through an activity involving different sheets of paper having different fractional lengths and breadths. Teacher divides the whole class into 3-4 hetrogeneous groups and gives 3 rectangular papers of different dimensions to each group and asks children to find their areas.		
LEARNING ACTIVITY	<p>Here teacher demonstrates the concept of multiplication of a fraction with a whole number and later a fraction with another fraction through some examples and asks children to do so in the cases of rectangular sheets of paper given to them.</p> <div style="text-align: center;"> </div>	Hetrogeneous groups are formed to participate in the activity and each group participates in the activity actively and learn the concept	Each student in the group participates in the activity and learns concept of multiplication of fractions
SUMMARY	Teacher writes the summary of the concept in a step wise procedure and asks children to note and read	pupils will note down and read the summary in groups	every individual reads the summary and notes it down
ASSESSMENT	Teacher asks children to solve the sums of try these section of pg.no: 8 along with example sums	every group will do the sums by discussion among each other	every individual solves the sums on their own

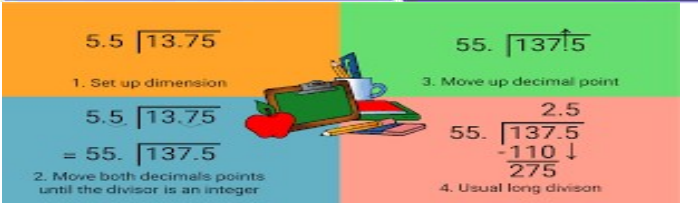
PRACTICE PERIOD: 1,2,3	MULTIPLICATION OF FRACTIONS, MULTIPLICATION OF A FRACTION BY A WHOLE NUMBER, MULTIPLICATION OF A FRACTION BY A FRACTION		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # NATURAL NUMBERS # WHOLE NUMBERS # INTEGERS # FRACTIONS # MULTIPLICATION # NUMERATOR # DENOMINATOR # VINCULUM # DIVISION	Whole class activity : one child comes to the board and reads the key words loudly and the remaining class follows.	Every child comes to the board and reads the key words and notes them down in their note books
SIMILAR LINES READING	Teacher performs some multiplications on the black board and asks children to do some more $\frac{2}{3} \times 4 = \frac{8}{3}$ $\frac{1}{5} \times \frac{5}{6} = \frac{1}{6}$	Each group will read the similar lines and will frame some more by discussion	Every Individual prepares their own similar lines using the lines prepared by the teacher
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and step wise procedure adopted in multiplication of fractions and asks children to read,note down and practice.	pupils will note down and read the summary in groups	every individual spells and reads the summary and notes it down
WRITING/ EDITING	Teacher guides children in doing sums of exercise 2.1 on their own and checks their writings	One group will check the writings of the other and vice versa	Slow learners are focused and teacher will ascertain that every individual learns the concept in the forth coming practice sessions

TEACHING PERIOD : 2	DIVISION OF FRACTIONS, DIVISION OF WHOLE NUMBER BY A FRACTION, DIVISION OF FRACTION BY A WHOLE NUMBER, DIVISION OF FRACTION BY AN ANOTHER FRACTION		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS	Brain storming session involving children with key words # Division # reciprocal # product # Non zero Numbers # Conversion of Mixed fraction into improper fraction	* Students read the keywords answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
CONCEPTUAL UNDERSTANDING	<p>Teacher demonstrates the concept of Division of fractions with whole number and vice versa and division of fraction by an another fraction with the help of some illustrations</p> <p><i>Example:</i></p> $3 \div \frac{3}{4} =$ <p><i>Solution:</i></p> $3 \div \frac{3}{4} = \frac{3}{1} \times \frac{4}{3} = \frac{4}{1} = 4$ $4 \div \frac{1}{2}$ <p>Change the division symbol to multiplication symbol. Flip the fraction.</p> $4 \times \frac{2}{1} = \frac{8}{1} = 8$ <p>Simply,</p> $\frac{1}{4} \div \frac{5}{4} = \frac{1}{4} \times \frac{4}{5} = \frac{1}{5}$ <p>Keep Change Flip</p> <p>Reciprocal</p>	pupils are divided into heterogeneous groups and given different number pairs to multiply using number line and pattern method by discussion	Each student in the group participates in the activity and learns the process of multiplication of integers
SUMMARY	Teacher once again writes important key words and step wise procedure adopted in division of fractions and asks children to note down and adopt.	Pupils will note down and read the summary in groups	Every individual reads the summary and notes it down and adopts the procedure
ASSESSMENT	Teacher gives some questions from Try These sections and from exercise 2.3	Every group will do the sums by discussion among each other	Every individual solves the sums on their own

PRACTICE PERIODS: 4,5,6,7	DIVISION OF FRACTIONS, DIVISION OF WHOLE NUMBER BY A FRACTION, DIVISION OF FRACTION BY A WHOLE NUMBER, DIVISION OF FRACTION BY AN ANOTHER FRACTION		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # Division # reciprocal # product # Non zero Numbers # Conversion of Mixed fraction into improper fraction	Whole class activity : one child comes to the board and reads the key words loudly and the remaining	Every child comes to the board and reads the key words and notes them down in their note books
SIMILAR LINES READING	Teacher performs some divisions on blackboard and asks children to do some more divisions by watching similar lines. $\frac{3}{5} \div 8 = \frac{3}{5} \times \frac{1}{8} = \frac{3}{40}$ $3 \div \frac{1}{6} = 3 \times 6 = 18$ $\frac{1}{8} \div \frac{1}{6} = \frac{1}{8} \times 6 = \frac{6}{8} = \frac{3}{4}$	Each group will participate in the activity and by doing the multiplication of integers multiple times they will get full command over multiplication of integers	Every individual will participate in the activity and by doing the multiplication of integers multiple times they will get full command over multiplication of integers
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and step wise procedure adopted in division of fractions and asks children to note down and adopt.	Pupil groups will read and adopt the procedure	Teacher focuses on every individual so that each one learns how to divide fractions
WRITING/ EDITING	Teacher gives some questions from Try These sections and guides them in doing the sums of exercise 2.3 and asks children to solve those sums and teacher checks the writings of children	One group will check the writings of the other and vice versa	in successive upcoming practice sessions

TEACHING PERIOD : 3	MULTIPLICATION OF DECIMAL NUMBERS MULTIPLICATION OF DECIMAL NUMBERS BY 10,100 AND 1000		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS	Brain storming session involving children with key words # Decimals # Whole Part # Decimal Part # places	* Students read the key words and answer the	Every Pupil will read and write the key words in their note
CONCEPTUAL UNDERSTANDING	Teacher demonstrates the concept of multiplication of decimal number with the help of some illustrations. MULTIPLICATION OF A DECIMAL WITH A WHOLE NUMBER <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="background-color: #90EE90; padding: 5px; border: 1px solid black;"> $\begin{array}{r} 1375 \\ \times 55 \\ \hline 75625 \end{array}$ <p style="font-size: small; text-align: center;">Forget about Decimal points and Multiply</p> </div> <div style="background-color: #FFB6C1; padding: 5px; border: 1px solid black;"> $\begin{array}{r} 13.75 \leftarrow 2 \text{ d.p.} \\ \times 5.5 \leftarrow 1 \text{ d.p.} \\ \hline 75.625 \leftarrow 1 \text{ d.p.} \end{array}$ <p style="font-size: x-small; text-align: center;">Decimal places of the First Number + Decimal places of the Second Number = Decimal places of the Third Number</p> </div> </div> <div style="border: 2px solid blue; padding: 10px; margin-top: 10px; background-color: yellow;"> <p style="text-align: center;">Multiplication of a Decimal by 10, 100, 1000</p> <p>When the multiplier is 10, 100 or 1000, we move the decimal point to the right by as many places as number of zeroes after 1 in the multiplier.</p> <p>For Example: $8.597 \times 10 = 85.97$ $8.597 \times 100 = 859.7$ $8.597 \times 1000 = 8597.0$</p> </div>	Hetrogeneous groups are created and different multiplications in decimals are given among groups	Every child participates in expanding the numbers involving 5 digits and ascertains learning.
SUMMARY	Teacher writes the properties table of integers under multiplication on the black board and asks children to read write and note down	pupils will note down and read the summary in	every individual reads the summary and notes it down
ASSESSMENT	Teacher gives some questions from Try These section of pg no: 20,22 24,26,and asks children to solve those sums	every group will do the sums by discussion among each other	every individual solves the sums on their own

PRACTICE PERIODS: 8,9,10	MULTIPLICATION OF DECIMAL NUMBERS MULTIPLICATION OF DECIMAL NUMBERS BY 10,100 AND 1000		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # Decimals # Whole Part # Decimal Part # places	Whole class activity : one child comes to the board and reads the key words	Every child comes to the board and reads the key words and notes them down in their note
SIMILAR LINES READING	Teacher performs some multiplications on the black board and asks children to do some more $3.834 \times 45 = 172.530$ $0.00054 \times 1000 = 0.54$	Each group will read the similar lines and will frame some more by discussion	Every Individual prepares their own similar lines using the lines prepared by the teacher
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and procedure adopted in multiplying decimals and asks children to read ,note down and adopt.	Pupil groups will read the table of properties and utilize	Teacher focuses on every individual so that each one knows and adopts the different
WRITING/ EDITING	Teacher asks children to fill the tables in 20,22,24,26 and solve the sums of exercise 2.2 on their own and teacher checks the writings of children	One group will check the writings of the other and vice versa	properties on multiplication of integers in successive upcoming practice sessions

TEACHING PERIOD : 4	DIVISION OF DECIMAL NUMBERS, DIVISION BY 10,100 AND 1000, DIVISION OF A DECIMAL NUMBER BY A WHOLE NUMBER, DIVISION OF A DECIMAL NUMBER BY ANOTHER DECIMAL NUMBER		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS	Brain storming session involving children with key words * Division of decimals * Divisor * Places	* Students read the key words and answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
CONCEPTUAL UNDERSTANDING	<p>Teacher demonstrates the concept of division of Decimal Numbers by 10,100,1000 , decimal by a whole number, division of a decimal by another decimal using some concrete examples</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p>Division of a Decimal Number by 10, 100 or 1000</p> <p>Division of a decimal number by 10, 100 or 1000 can be performed by moving the decimal point to the left by as many places as the number of zeroes in the divisor.</p> <p>For Example: $752.3 \div 10 = 75.23$ $752.3 \div 100 = 7.523$ $752.3 \div 1000 = 0.7523$</p> </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p>Division of a Decimal by a Whole Number</p> <p>To divide a decimal number by a whole number the division is performed in the same way as in the whole numbers. We first divide the two numbers ignoring the decimal point and then place the decimal point in the quotient in the same position as in the dividend.</p> <p>Divide: $24.66 \div 12$</p> $\begin{array}{r} 2.05 \\ 12 \overline{) 24.66} \\ \underline{-24} \\ 066 \\ \underline{-60} \\ 60 \\ \underline{-60} \\ 0 \end{array}$ <p>Therefore, $24.66 \div 12 = 2.05$</p> </div> </div>	Heterogeneous groups are created different groups will be given different decimals and will be asked to divide them and later check corresponding divisions	Every child participates in the activity and learns the process of division of decimals and understands the concept of division
LEARNING ACTIVITY			
SUMMARY	Teacher once again writes important key words and step wise procedure adopted division of decimals and asks children to note down and adopt.	pupils will note down and read the summary in groups	every individual reads the summary and notes it down and adopts the procedure
ASSESSMENT	Teacher gives some questions from Try These section and asks children to solve those sums	every group will do the sums by discussion among each other	every individual solves the sums on their own

PRACTICE PERIODS: 11,12,13,14,15	DIVISION OF DECIMAL NUMBERS, DIVISION BY 10,100 AND 1000, DIVISION OF A DECIMAL NUMBER BY A WHOLE NUMBER, DIVISION OF A DECIMAL NUMBER BY ANOTHER DECIMAL NUMBER		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books * Division of decimals * Divisor * Places	Whole class activity : one child comes to the board and reads the key words	Every child comes to the board and reads the key words and notes them down in their note
SIMILAR LINES READING	Teacher performs some divisions of decimals on bb and asks children to perform some more divisions like this. $4.32 \div 5 = 0.864$ $332.4896 \div 100 = 3.324896$ $42.35 \div 3.5 = 12.1$	Each group will read the similar lines and will frame some more by discussion	Every Individual will frame some more on their own
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and step wise procedure adopted in division of decimals and asks children to read ,note down and adopt.	Pupil groups will read and adopt the procedure	Teacher focuses on every individual so that each one learns division of decimals in successive upcoming practice sessions
WRITING/ EDITING	Teacher gives some questions from examples as well as exercise 2.3,2.4,2.5 and asks children to solve those sums and teacher checks the writings of children	One group will check the writings of the other and vice versa	