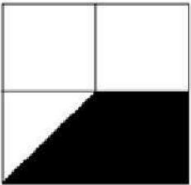
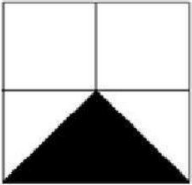
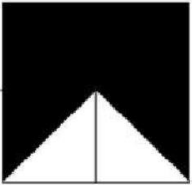
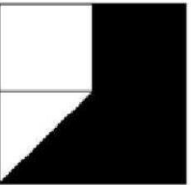


Class: VII	Subject: Mathematics	Day:1	Time duration:40 min
Name of the lesson/ unit	Ch-2 Fractions & Decimals		
Topic/lesson	- Recall the fraction and types of fraction - Multiplication of fractions		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to : - Recall the fraction and different types of fractions. - Multiply a fraction by a whole number , fraction & mixed fraction. - Reduce into the lowest form (proper or mixed fraction). - Understand the use of the word ‘of’ and apply with a fraction as an operator.		
Common misconception (if any):	- Conversion of Improper fraction into mixed fraction. - Conversion of mixed fraction into improper fraction. - Multiplying the numerator with denominator& vice versa. - Cancelling numerator with numerator and denominator with denominator. - Calculation error - Not reducing into lowest form. - Wrong interpretation of “OF”.		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (10 Min)	Teacher will draw two circles and show $\frac{1}{4}$ on both of them then she will discuss that when we combine both the fractions then it gives twice of $\frac{1}{4}$ which is $\frac{1}{2}$. She will repeat the activity with $3 \times \frac{1}{4} = \frac{3}{4}$ also.		
Video : 3 Min	Teacher will ask which type of fractions are $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$? A flipped video will be shown to the students based on types of fraction.		
Questioning &discussion(Verbal):2 min	Teacher will ask few questions to initiate the topic- Convert (i) $\frac{17}{5}$ into mixed fraction. (ii) $3\frac{4}{7}$ into improper fraction.		

Questioning followed by Explanation on the board:5 min (Explanation & Discussion among peers) Peer discussion and book work:2 min Question(To build the analytical thinking): 3 Min Independent work followed by discussion on board, students will be called on board to solve the questions: 8 min	Teacher will collect responses and use their previous knowledge of fractions. Student will note in the notebook. Teacher will explain when two fractions are multiplied , the numerator is the product of numerator and the denominator is the product of the denominators , i.e Product of fractions = Product of numerator / product of denominator Eg:- $\frac{3}{7} \times \frac{2}{5} = \frac{6}{35}$ 'of' represent multiplication Eg :- $\frac{1}{3}$ of 7 = $\frac{1}{3} \times 7 = \frac{7}{3} = 2\frac{1}{3}$ Note : We cannot cancel numerator with numerator and denominator with denominator. <i>Students will do book work and teacher mentor the learners on the way.</i> <i>Teacher will draw the figure on the board and ask this question to the students.</i> Which of the given figures correctly represent $\frac{3}{8}$? Note: Fraction represents the shaded region  (A)  (B)  (C)  (D) Students will do same in the notebook. <u>ANS: A</u> Teacher will ask the students to solve on the board .
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	<i>Teacher will ask students to book exercise.</i> <i>Teacher will collect the responses and discuss the correct answers.</i>
Home Learning	From book Assignment will be given
Resources	NCERT Book of Mathematics for Class VII Filpped video

Class: VII	Subject: Mathematics	Day:2	Time duration:40 min
Name of the lesson/ unit	Ch- 2 Fraction and Decimal		
Topic/lesson	Multiplication of fractions		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be to : • Multiply a fraction by a fraction& mixed fraction. • Reduce into the lowest form (proper or mixed fraction) • Compare the product of two fractions. • Comprehend the word problem. • Solve word problems based on multiplication of fractions.		
Common misconception (if any):	• Conversion of Improper fraction into mixed fraction. • Conversion of mixed fraction into improper fraction. • Multiplying the numerator with denominator& vice versa. • Cancelling numerator with numerator and denominator with denominator. • Calculation error • Not reducing into lowest form. • Wrong intepretation of “OF”. • Wrong Comprehension. Not identifying the correct operation while solving word problem		
Prerequisite knowledge:	Knowledge of Types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (5 Min)	Oral questions will be asked		
Questioning &discussion : 10 Min	Teacher will give examples $\frac{2}{3} * \frac{4}{5} = \frac{8}{15} < 1$ $\frac{5}{4} * \frac{6}{4} = \frac{30}{16} > 1$ Teacher will ask few questions to initiate the topic- Q. Product of two proper fraction is less than or greater than each of the fractions?		

Demonstration by the teacher on the board, followed by students work in Note Book:10 min Peer work Guided Practice : 10 Min	Q. Product of two improper fraction is less than or greater than each of the fractions? Q. When we multiply two fractions we get the product of ____/ product of ____ ? Q. How do we change unlike fractions to like fractions ? Q. What is an equivalent fraction ? Q. How to find the equivalent fractions ? Q.Can we compare two fractions when they are unlike ? What if they are unit fraction ? <u>Teacher will discuss few Questions on board.</u> <i>Students will solve book Questions in collaboration with their peer</i>
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	<i>An activity through ribbon will be done.</i>
Home Learning	Assignment from book will be given
Resources	NCERT Book of Mathematics for Class VII Lab activity through ribbon



Khaitan Public School,Sahibabad

Class: VII	Subject: Mathematics	Day:3	Time duration:40 min
Name of the lesson/ unit	Ch- 2 Fraction and Decimal		
Topic/lesson	Word Problems (Multiplication of fractions)		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to • Comprehend the word problem • Solve word problem based on multiplication and division of fractions.		

Common misconception (if any):	• Cancellation of numerator to numerator and denominator to denominator. • Wrong Comprehension. • Not identifying the correct operation while solving word problem.
Prerequisite knowledge:	Knowledge of types of fractions
Assessment of qualifying knowledge:	Add & subtraction fractions (Board test & oral)
Transaction methodology	
Starter/ warm up: Questioning(Verbal) (10 Min)	A rope of length $\frac{65}{4}$ m has to be tied around a tree many times (as shown in the figure). If one circular loop around the tree measures $\frac{5}{8}$ m, then how many such loops can be made around the tree? (A) 7 (B) 13 (C) 18 (D) 26 
Questioning followed by Explanation on the board: 5min (Explanation & Discussion among peers) <i>Peer work: guided practice: 5 min</i> <i>Discussion in class by students: 5min</i> <i>Independent Work: 10 minutes</i>	Teacher will ask the following questions to the students : Q. How you will identify which operations is to be used in the word problem. Q. List the keywords for multiplication. Q. list the keywords for division. Q. Does keywords help while solving the word problems? Q. Is it required to write units ? After collecting the response teacher will ask students to write key words in bubble sin their n otebooks. S/he will explain how to comprehend the word problems based on fractions. <i>Student will do questions from book.</i> Teacher will discuss the solutions of the questions by taking multiple responses from the students. <u>Students will be asked to solve the questions independently</u> Solution of the questions will be discussed on board and students will make corrections in their NB and workbook work.
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	<i>Teacher will collect the responses from the students and may call few students to solve the questions on the board also(If time allows).</i>
Home Learning	Assignment from book will be given
Resources	NCERT Book of Mathematics for Class VII

Class: VII	Subject: Mathematics	Day:4	Time duration:40 min
Name of the lesson/unit	Ch – 2 Fractions and Decimals		
Topic/lesson	Division of Fractions		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to - Find reciprocal of fraction - Divide a whole number and fraction by a fraction & vice versa - Comprehend the word problem - Solve word problem based on division of fractions.		
Common misconception (if any):	- Doing wrong reciprocal i.e(first fraction given) - Cancellation of numerator to numerator and denominator to denominator. - Not converting mixed fraction to improper fraction, directly cancellation. - Wrong Comprehension. - Not identifying the correct operation while solving word problem.		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (10 Min)	What is the reciprocal of $\frac{4}{7}$ and $\frac{8}{3}$? Mutliply the number and its reciprocal? What do you get? The product of a number and its reciprocal is always 1. (Student will note in the notebook.)		
Think Pair and Share: 2 minutes	Teacher will ask students to think on following questions; Q-Will the proper fraction be again a proper fraction? Q- Will the reciprocal of an improper fraction be again an improper fraction?		
Demonstration by the teacher on the board, followed by students work in NB: 10 min	Teacher will show a simple division on board $10 \div 2 = 5$ S/he will ask students to reflect on this question in terms of fraction Thinking time - Students will think on the question and may or may not give the answer of the same. Teacher will explain that question turns out to be $10/2 = 10 \times \frac{1}{2} = 5$		

Independent work followed by discussion on board, students will be called on board to solve the questions:13 min	What is done in terms of fraction here- Thinking Time Teacher will take forward the discussion and explain that while dividing the divisor has to be reciprocated. Teacher will ask the following questions to the students : Q. Which fraction reciprocal should be done while dividing? Q. Do we have to change mixed fraction into improper fraction while dividing? After collecting the response teacher will explain how to divide two fractions. Student will note in the notebook. To divide two fractions , we multiply the dividend fraction by the reciprocal of the divisor fraction, i.e. Fraction I ÷ Fraction II = Fraction I × Reciprocal of Fraction II Eg:- $\frac{1}{3} \div \frac{5}{6} = \frac{1}{3} \times \text{reciprocal of } \frac{5}{6} = \frac{1}{3} \times \frac{6}{5} = \frac{2}{5}$ (Do it in rough column) Teacher will explain few questions and followed by the student in notebook. <u>Students will do Questions on their own in the notebook</u> and teacher will ask the students to solve on the board .
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	<i>Flipped video will be shown</i>
Home Learning	Assignment from book will be given
Resources	NCERT Book of Mathematics for Class VII Flipped video

Class: VII	Subject: Mathematics	Day:5	Time duration:40 min
Name of the lesson/unit	Ch – 2 Fractions and Decimals		
Topic/lesson	Decimals		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to - Recall their prior knowledge of decimals ie. Place value chart, comparison, expanded form, - Solve real life problems based on addition and subtraction of decimals.		
Common misconception (if any):	- Shifting of decimals - Counting the wrong digits in multiplication - Wrong Placement of decimals while multiplying and dividing. - Wrong comprehension. - Not identifying the correct operation while solving word problem. - Calculation error		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (10 Min)	Teacher will show 3/10 and 7/10 on board using bar diagram and ask students to identify the bigger fraction. After that teacher will ask Q- Can we refer 3/10 in terms of decimal number? Q- How it will be termed as? Q- What is the place of 3 in 0.3? Q- What do you mean by decimal numbers ? Q- Which decimal number is greater in 0.3 and 0.7?		
Using prior knowledge Questioning & discussion(Verbal): 5 min	Teacher will collect the responses and discuss the place value chart of decimals with students. Students will note down the place value chart and expanded form in two ways of 24.378 in their notebooks. Teacher will ask few questions to initiate the topic- Q. What are like and unlike decimals ? Q. How to convert unlike decimals into like decimals ?		

Independent work: 10 minutes Collaborative work: 2-3 minutes	Students will be told to do book questions in their notebooks after discussing with their partners
Discussion followed by independent work:10 minutes	Teacher will collect the responses and students will be asked to solve the questions in their notebooks
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	Teacher will discuss the answers of the questions done
Home Learning	Investigate about multiplication and division of decimals with 10, 100 and 1000
Resources	NCERT Book of Mathematics for Class VII



Khaitan Public School, Sahibabad

Class: VII	Subject: Mathematics	Day:6	Time duration:40 min
Name of the lesson/ unit	Ch – 2 Fractions and Decimals		
Topic/lesson	Multiplication & Division of Decimals by 10,100 , 1000.		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to • Multiply and divide decimals with 10, 100 , 1000. • Comprehend the word problem. • Solve word problems based on multiplication & division of decimals by 10,100 ,1000.		
Common misconception (if any):	• Shifting of decimals • Counting the wrong digits in multiplication • Wrong Placement of decimals while multiplying and dividing. • Wrong comprehension. • Not identifying the correct operation while solving word problem. Calculation error.		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		

Transaction methodology	
Starter/ warm up: Questioning(Group work) (10 Min)	<i>Teacher will divide students in groups of four students and ask them to collaborate and show their learning about multiplication of decimals on board. Students will be called after 2-3 minutes of collaboration to present their work. After that teacher will call few groups to show the presentation.(Teacher will choose on the basis of students' preparation)</i>
Explanation by teacher on board:(5+2 = 7 min)	Teacher will explain how to multiply a decimal number by 10 , 100 ,1000: $6.34 \times 10 = 63.4 \quad \frac{634}{100} \times 10 = \frac{634}{10} = 63.4$ There is one zero in 10, therefore we shift the decimal point by one place to the right. $6.34 \times 100 = 634 \quad \frac{634}{100} \times 100 = \frac{634}{1} = 634$ In 100 , there are two zeroes , therefore we shift the decimal point by two places to the right. $6.34 \times 1000 = 6340 \quad \frac{634}{100} \times 1000 = 634 \times 10 = 6340$ In 1000 , there is three zeroes, therefore we shift the decimal point by three places to the right. Teacher will make the students write in the notebook the rule of multiplication in the notebook. When we multiply a decimal number by 10, 100 or 1000, the digits in the product are same as in the decimal number but the decimal point in the product is shifted to the right by as, many places as there are zeros over one.(With examples)
Guided practice:5 minutes	Students will be told to Do questions from book in their notebooks.
Discussion:2 minutes	Teacher will discuss the answer in the class.
Collaborative work(Peer work); 2 minutes	<i>Teacher will ask Students to collaborate and think what if 635 is divided by 10, 100 or 1000. Teacher will supervise their work and mentor the students (Low performers) if required.</i>
Explanation:5 minutes	Teacher will discuss the responses of students and ask them to write the rule of division by 10, 100 or 1000 When we divide a decimal number by 10, 100 or 1000, the digits in the quotient are same as in the decimal number but the decimal point in the quotient is shifted to the left by as, many places as there are zeros over one. $635 \div 10 = 63.5$ $635 \div 100 = 6.35$ $635 \div 1000 = 0.635$
Independent work:5 minutes	<u>Students will be asked to solve,questions in the notebook.</u> <u>Teacher will guide the learners on the way</u>

Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	A video will be shown to make the concept clear.
Home Learning	Assignment from book will be given
Resources	NCERT Book of Mathematics for Class VII



Khaitan Public School, Sahibabad

Class: VII	Subject: Mathematics	Day:7	Time duration:40 min
Name of the lesson/ unit	Ch – 2 Fractions and Decimals		
Topic/lesson	Multiplication of Decimals		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student will be able to • Multiply decimal numbers by whole number and decimal number. • Comprehend the word problem • Create and solve a word problem based on day to day life applications of decimals		
Common misconception (if any):	• Shifting of decimals • Counting the digits in multiplication • Placement of decimals while multiplying. • Wrong comprehension. • Not identifying the correct operation while solving word problem. Calculation error		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (5 Min)	Teacher will ask students to speak about their understanding of multiplication so far: Multiplication of whole numbers and multiplication of decimals.		
Questioning followed by Explanation on the board:10 min	Teacher will collect the responses and ask following questions - Q.Find : (i) $0.1 \times 10 = \underline{\hspace{2cm}}$ (ii) $0.1 \times 5 = \underline{\hspace{2cm}}$		

Independent work followed by discussion on board, students will be called on board to solve the questions:15 min Discussion on board: 7 minutes	To multiply a decimal number by a whole number or decimal number , we multiply the numbers (without decimals) and place the decimal point in the product as many decimal places from the right as the sum of the decimals places in the given decimal numbers. Eg:- 3.14×1.1 $314 \times 11 = 3454$ (sum of decimal places = $2 + 1 = 3$) Therefore $3.14 \times 1.1 = 3.454$ <u>Teacher will ask students to do questions on their own</u> . Teacher will mentor the students . Teacher will call the students to solve few questions on the board and do the correction if required
Closure/ Plenary(Think Pair and Share) N.B: (3 Min)	In the following multiplication process, identify the step which has an error. $\begin{array}{r} 2.03 \\ \times 1.3 \\ \hline \end{array}$ Step 1 $\rightarrow 609$ Step 2 $\rightarrow 2030$ Step 3 $\rightarrow 26.39$ (A) Step 1 (B) Step 2 (C) Step 3 (D) All steps are correct
Home Learning	Assignment from book will be given
Resources	NCERT Book of Mathematics for Class VII

Class: VII	Subject: Mathematics	Day:8	Time duration:40 min
Name of the lesson/ unit	Ch – 2 Fractions and Decimals		
Topic/lesson	Division of Decimal Numbers		
Learning Objective	To be able to solve problems based on fractions & decimals.		
Expected learning outcomes:	Student be able to • Divide a decimal number by a whole number and by a decimal number. • Comprehend the word problem • Create and solve word problem of day to day life decimal applications.		
Common misconception (if any):	• Shifting of decimals • Counting the digits in division • Placement of decimals while dividing. • Wrong comprehension. • Not identifying the correct operation while solving word problem. Calculation error.		
Prerequisite knowledge:	Knowledge of types of fractions		
Assessment of qualifying knowledge:	Add & subtraction fractions(Board test & oral)		
Transaction methodology			
Starter/ warm up: Questioning(Verbal) (5 Min)	Teacher will ask: Q What are the steps to divide the two fractions? Q.- What is the similarity between fraction and decimals? Q.- Can you apply the same method for division of decimals?		
Questioning followed by Explanation on the board:10 min	Teacher will ask few questions to initiate the topic- Q.Find : (i) $2745 \div 10 = \underline{\hspace{2cm}}$ (ii) $2137 \div 100 = \underline{\hspace{2cm}}$ # To divide two decimal numbers , we convert them into fractions and then divide divide them as fractions. The resultant fraction is then converted to a decimal number. Teacjer will discuss KEEP CHANGE FLIP method Means KEEP the dividend same, CHANGE the sign FLIP the divisor Eg:- $15.4 \div 2 = \frac{154}{10} \div 2 = \frac{154}{10} \times \frac{1}{2} = \frac{1}{10} \times \frac{154}{2} = \frac{1}{10} \times 77 = 7.7$		
Independent work followed by discussion on board, students will be called on board to solve the questions:15 min			

Discussion on board:5 minutes	Teacher will ask students to do <u>Questions on their own</u> . Teacher will mentor the students. Teacher will call the students to solve few questions on the board and do the correction if required.
Closure/ Plenary(Think Pair and Share) N.B: (5 Min)	Draw content map of the chapter
Home Learning	Revise the C.W
Resources	NCERT Book of Mathematics for Class VII