

LESSON PLAN
MATHEMATICS VII
CH 2 FRACTIONS AND DECIMALS

Unit	FRACTIONS AND DECIMALS Chapter 2
Class Transaction	Total: 9 periods (approx. 40 min each)
Pre-requisite for the course	This lesson requires 1. Basic knowledge of fractions. 2. Knowledge of addition and subtraction 3. Knowledge of equivalent fractions
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. Group Discussion 4. HW notebook
Objective	Students would be able to learn multiplication and division of fractions as well as of decimals., thereby inculcating competencies like collaboration, critical thinking and creativity
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will develop the ability to understand</i> • Multiplication of whole numbers and fractions, mixed fractions. • Division of whole numbers and fractions, mixed fractions. • Multiplication and division with decimal numbers SKILLS and COMPETENCIES-<i>Students would be able to</i> • Develop the ability to analyze mixed, proper and improper fractions and multiplication and division on them • Perform numerical skills like simplifications of fractions and decimals and develop critical thinking and collaboration in the process.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, Muddiest point of discussion, think pair share, graphic organizer, brain storming Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Brain Storming-The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. <i>Introduction of the topic-</i> ppt and Digital Content would be shared <i>Guided practice followed by Independent Practice-</i> NCERT questions to be discussed in the classroom. Techniques to be used: Quiz

	Daily Practice Problem MCQ Peer Assessment Case Studies Lab Activities Any Other						
Resources	Text Book: NCERT text book for Mathematics Reference Book 1. CBSE Exemplar						
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book. H.W. notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 marks On time submission.....1 mark Presentation/ Neatness.....1 mark Content.....3 marks It is also advised that the students come to the class with proper background knowledge of the topic under discussion.						
Assessments	Through Pen Paper Test Students will be assessed creatively and critically <table> <tr> <td>4 UNIT TESTS</td> <td>20 Marks each</td> </tr> <tr> <td>HALF YEARLY EXAMINATION</td> <td>80 Marks</td> </tr> <tr> <td>ANNUAL BOARD EXAMINATION</td> <td>80 Marks</td> </tr> </table> INTERNAL ASSESSMENT 10 Marks - Note Book Submission 05 Marks - Lab Practical (Subject Enrichment) 05 Marks Through lab Practical Students are assessed for Collaboration, Character building, Character Building	4 UNIT TESTS	20 Marks each	HALF YEARLY EXAMINATION	80 Marks	ANNUAL BOARD EXAMINATION	80 Marks
4 UNIT TESTS	20 Marks each						
HALF YEARLY EXAMINATION	80 Marks						
ANNUAL BOARD EXAMINATION	80 Marks						
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For gifted students:</i> - Encouragement for referring other resources <i>For weak students:</i> - Buddy help to be provided - Provide grade-up classes <i>For differently abled students:</i> - Ignore spelling mistakes and formulae, if not written - Call parents at regular intervals - Provide grade-up classes						
Marks	The weightage would be given by CBSE.						

Assessment	1	Express 0.041 as a fraction.
	2	Ali divided one fruit cake equally among six persons. What part of the cake he gave to each person?
	3.	Subtract $1\frac{1}{6}$ from $4\frac{1}{6}$
	4.	Add $\frac{5}{6}$ and $\frac{8}{12}$
	5.	Sushant reads $\frac{1}{3}$ part of a book in 1 hour. How much part of the book will he read in 2 hours?
	6.	Express in kg: (i) 200 g (ii) 3470 g (iii) 4 kg 8 g (iv) 2598mg

DAY	ONE
Objective	To illustrate the addition of fractions- proper, improper and mixed.
Assessment of qualifying knowledge	Quiz and Knowledge testing on like and unlike fractions.
Learning Outcomes	<u>KNOWLEDGE</u>- Students will identify like and unlike fractions <u>SKILLS</u> and <u>COMPETENCIES</u>- Students would be able to Reason effectively and critically apply addition of fractions
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, Muddiest point of discussion, brain storming Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Anticipatory Set: 10 min Facilitator will ask few questions to introduce the topic • What is a fraction? • What is like fraction? • What are proper fraction? • What are improper fraction? Discussion of topic through Collaborative Learning: 15 min <u>Inquiry based learning</u> (Critical Thinking and Problem Solving) Addition and Subtraction of fractions will be explained by converting the fractions to like terms. The facilitator would take rounds and ensure that each learner is engaged. Guided practice: 10 min Addition and Subtraction of fractions will be explained by converting the fractions to like terms. The facilitator would take rounds and help the students in solving the questions. Independent Practice: Students will go through the solved examples before Ex 2.1 of NCERT text book. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book 1. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book.
Assessments	Oral Test (5 minutes)
DAY	TWO
Objective	Students will be able to illustrate the addition of fractions- proper, improper and mixed in communicative and collaborative manner .
Assessment of	Written questions on subtraction on fractions.

qualifying knowledge	
Learning Outcomes	<u>KNOWLEDGE</u>- Students will know and Demonstrate the ability to subtraction of numbers between any two given numbers <u>SKILLS and COMPETENCIES</u>- Students will be able to differentiate and classify and various properties of subtractions in collaboration with each other.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, Muddiest point of discussion Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Brainstorming on the previously taught concept would be done. Discussion of topic through Collaborative Learning: 15 min (Critical Thinking, Collaboration) An quick quiz will be taken and students will be asked to write laws of exponents Guided practice: 15 min The students, with the help of the facilitator, will solve the questions from NCERT book of Exercise – 2.1 in their notebook in the class with the help of their teacher. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher’s guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.1 in their Math HW notebook. Students who would difficulty in solving the problem would solve with the help of their buddies. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from the course book.
Assessments	Oral quiz (5 minutes)
DAY	THREE
Objective	Given two or more fractions, the learner will be able to find the product of fractions on paper without any mistake.
Assessment of qualifying knowledge	Written questions
Learning Outcomes	<u>KNOWLEDGE</u>- Students will develop the ability to understand the Multiplication and division of fractions. <u>SKILLS and COMPETENCIES</u> - Students would be able to critically apply the laws and concepts in various real life situations and collaboratively

	realize the fact that fractions can be compared as larger and smaller.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The method of multiplication will be explained and the students will be asked to multiply different fractions Guided Practice: 15 min Students will be asked to find the product of fractions and the solution will be discussed. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.2 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from the course book.
Assessments	MCQ (5 minutes)
DAY	FOUR
Objective	Given two or more fractions the learner will be able to find the product of fractions on paper without any mistake.
Assessment of qualifying knowledge	Written test on powers.
Learning Outcomes	KNOWLEDGE- Students will develop the ability to understand the Multiplication and division of fractions. SKILLS and COMPETENCIES - Students would be able to critically apply the laws and concepts in various real life situations and collaboratively realize the fact that fractions can be compared.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The method of multiplication will be explained and the students will be asked to multiply different fractions Guided Practice: 15 min

	Students will be asked to find the product of fractions and the solution will be discussed. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.2 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from the course book.
Assessments	Written test (5 minutes)
DAY	FIVE
Objective	Given two or more fractions the learner will be able to find the product of fractions on paper without any mistake.
Assessment of qualifying knowledge	Written test on fractions and decimals.
Learning Outcomes	KNOWLEDGE- <i>Students will develop the ability to understand the</i> Multiplication and division of fractions. SKILLS and COMPETENCIES - <i>Students would be able to critically apply fractions and decimals in various real life situations and collaboratively realize the fact that fractions can be multiply.</i>
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The method of multiplication will be explained and the students will be asked to multiply different fractions Guided Practice: 15 min Students will be asked to find the division of fractions and the solution will be discussed.. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.3 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics

	Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from the course book.
Assessments	Written test (5 minutes)
DAY	SIX
Objective	Given decimal numbers, students will be able to compare them by writing on a paper with no mistake.
Assessment of qualifying knowledge	Written test on multiplication and division of fractions.
Learning Outcomes	KNOWLEDGE- <i>Students will develop the ability to understand the</i> Multiplication and division of decimals. SKILLS and COMPETENCIES - <i>Students would be able to critically apply the fractions and decimals in various real life situations and collaboratively.</i>
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The comparison of two decimals will be explained to find the greater one. Guided Practice: 15 min Students will be given questions to solve from the exercise and answers will be discussed. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.4 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book.
Assessments	Written test (5 minutes)
DAY	SEVEN
Objective	Given a set of decimal numbers, students should be able to multiple decimal by another decimal and by 10, 100 and 1000 by writing on a piece of paper, without any mistake.

Assessment of qualifying knowledge	Written test on multiplication and division of fractions
Learning Outcomes	<u>KNOWLEDGE</u>- Students will develop the ability to understand the Multiplication and division of decimals. <u>SKILLS and COMPETENCIES</u> - Students would be able to critically apply the laws and concepts in various real life situations and collaboratively.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The students will be explained the method of multiplying a fraction by 10, 100, 1000 and 10000 by shifting decimals and then they will be given questions from the exercise. Guided Practice: 15 min Students will be asked questions individually to make sure that they have followed the method. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.5 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book.
Assessments	Written test (5 minutes)
DAY	EIGHT
Objective	Given a set of decimal numbers, students will be able to divide any two decimals by writing them on paper without any mistake.
Assessment of qualifying knowledge	Written test on multiplication and division of decimals.
Learning Outcomes	<u>KNOWLEDGE</u>- Students will develop the ability to understand the Multiplication and division of decimals. <u>SKILLS and COMPETENCIES</u> - Students would be able to critically apply the laws and concepts in various real life situations and collaboratively.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min

use any other too.)	(Critical thinking) The students will be explained the method of division of two decimals and also to divide a decimal by 10, 100 or 1000. Guided Practice: 15 min Students will be given questions to solve from the exercise and answers will be discussed. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts from their course book of Exercise 2.6 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book.
Assessments	Written test (5 minutes)
DAY	NINE
Objective	Given decimal numbers, students will be able to compare them by writing on a paper with no mistake.
Assessment of qualifying knowledge	Written test on multiplication and division of decimals.
Learning Outcomes	<u>KNOWLEDGE</u>- Students will develop the ability to understand the Multiplication and division of decimals. <u>SKILLS and COMPETENCIES</u> - Students would be able to critically apply the laws and concepts in various real life situations and collaboratively.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Inductive deductive reasoning, think pair share Dimensions of learning- D1, D3 Transaction would proceed in the following manner- Recapitulation: 5 min Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min (Critical thinking) The division of two decimals will be explained. Guided Practice: 15 min Students will be given questions to solve from the exercise and answers will be discussed. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 2.7 in their Math HW notebook. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.

Resources	Text Book: NCERT text book for Mathematics Reference Book CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks from their course book.
Assessments	Written test (5 minutes)