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Fractions

SPECIFIC OBJECTIVES

The students will

- recall different types of fractions learnt earlier.
- know the equivalent fractions and learn to reduce the fractions to their simplest form.
- understand comparing and ordering of fractions.
- learn addition/subtraction of different fractions, viz., like/unlike/mixed fractions.
- know how to multiply a fraction by a whole number or by another fraction.
- learn about reciprocal/multiplicative inverse of a fraction.
- know the division of a fraction and a whole/fraction.
- understand the application of fractions in daily activity.

CONTENTS EXPLAINED INSIDE THE CHAPTER

TEACHING AIDS

Drawing sheets, a tracing paper, sketch pens, a geometry box, paper, a pencil, a chalk, a blackboard, etc.

TEACHING STRATEGY

- Though the students have learnt about fractions yet the teacher should recall the concepts before moving next. To do this, she should instruct them to do 'Let Us Recall' exercise.
- Then, the teacher should talk with them about the type of fractions including equivalent fractions. Also, she should develop the idea to reduce a fraction in its simplest form. For text

and exercise, she should go to pages 117–120.

- Next, the teacher should explain to them how to compare and order the given fractions. For better understanding, she should demonstrate a few samples using figures as given in the text. For text and exercise, she should go to pages 121–124.
- Thereafter, the teacher should encourage the students to add/subtract different types of fractions as they have already learnt in the previous classes. To develop the interest for using these operations, she may involve them in Maths Lab Activity. For text and exercise, she should go to pages 124–127.
- Further, the teacher should explain to them about the multiplication of fractions. First, she should teach them how to multiply a whole number and a fraction and then the multiplication of two fractions. She should focus on common error that is committed by students generally. For text and exercise, she should go to pages 127–131.
- For the division of fractions, the teacher should explain the concept of the reciprocal of a fraction. Sometimes, the reciprocal is also known as a multiplicative inverse.
- Then, she should discuss dividing a whole number by a fraction, a fraction by a whole number and a fraction by another fraction. For text and exercise, the teacher should go to pages 131–134.
- By going through the HOTS questions, the teacher should involve them in performing the job given under puzzle.

EXPECTED LEARNING OUTCOMES

Students are able to

- recognise different types of fractions like proper, improper, mixed, etc.
- check whether the given fractions are equivalent or not.
- convert a fraction to its lowest term.
- compare and arrange the fractions in a particular order.
- add/subtract two or more fractions conveniently.
- multiply/divide the fractions by wholes/fractions.
- find out the reciprocal of a fraction.
- tackle the situations involving the operations of fractions in daily life.

SUGGESTED PUZZLE

After completing the topic addition and subtraction of fractions, the teacher may use this puzzle to reinforce the students' knowledge.

$\frac{1}{3}$	+	$\frac{1}{4}$	−	$\frac{5}{24}$	=	
−		+		−		+
$\frac{1}{4}$	−	$\frac{1}{12}$	+	$\frac{1}{8}$	=	
+		−		+		−
$\frac{7}{24}$	+	$\frac{1}{8}$	−	$\frac{1}{6}$	=	
=		=		=		=
	−		+		=	