



**MONTH : SEPTEMBER**

**SESSION : 5**

**CLASS : V**

**SUBJECT : MATHEMATICS**

**CHAPTER NUMBER: 9**

**CHAPTER NAME : FRACTION**

**SUB-TOPIC : DIVISION OF FRACTIONS**

**EXERCISE 9 D**

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**CHANGING YOUR TOMORROW**

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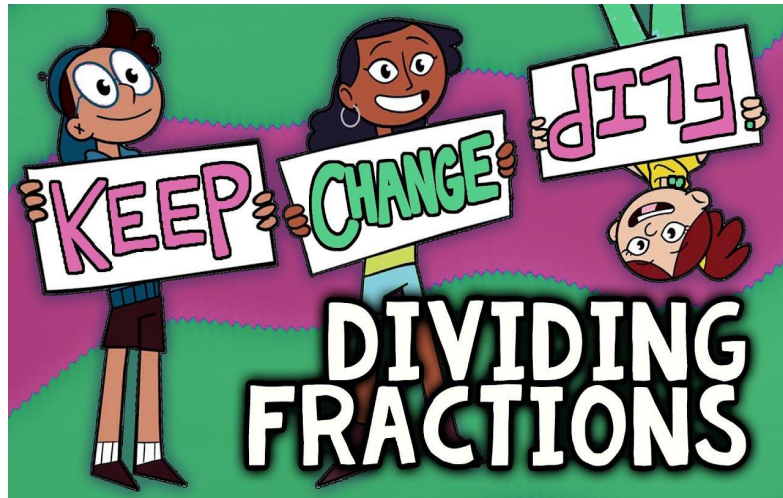
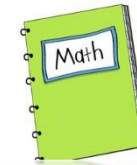
## **LEARNING OBJECTIVE :**

**Enable the students**

- **To divide a fraction by another fraction.**
- **To reduce to their lowest term**

# Division of Fractions

Division of Fractions



EXAMPLE 1

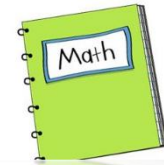
KEEP CHANGE FLIP

$$\frac{2}{9} \div \frac{1}{3}$$

$$3 \frac{\cancel{2}}{9} \times \frac{\cancel{3}}{1} = \frac{2}{3}$$



# Division of Fractions



## Example: 1

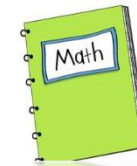
$$\frac{1}{3} \div 2$$

$$\frac{1}{3} \times \frac{1}{2} = \frac{1 \times 1}{3 \times 2} = \frac{1}{6}$$

Diagram illustrating the 'Keep, Change, Flip' rule for dividing fractions. The first fraction  $\frac{1}{3}$  is circled in red with an arrow pointing to the word 'keep'. The division sign is replaced by a multiplication sign ( $\times$ ). The second fraction  $\frac{1}{2}$  is circled in red with an arrow pointing to the word 'Flip'. A red triangle is drawn around the multiplication sign and the second fraction, with an arrow pointing to the word 'change'.



# Division of Fractions



## Example: 2

$$\frac{11}{15} \div \frac{2}{3}$$

$$= \frac{11 \times \cancel{3}}{\cancel{15} \times 2} = \frac{11}{10} = 1\frac{1}{10}$$

## Example: 3

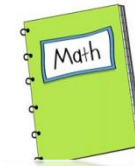
$$2\frac{19}{26} \div 16\frac{5}{13} = \frac{71}{26} \div \frac{213}{13}$$

$$= \frac{\cancel{71} \times \cancel{13}}{26 \times \cancel{213}} = \frac{1}{6}$$

2                      3



# Division of Fractions

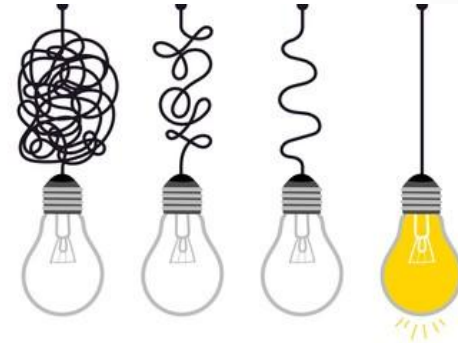


**Example: 4**

**Write the quotient in its simplest form**

$$\frac{\frac{6}{7}}{\frac{18}{35}}$$

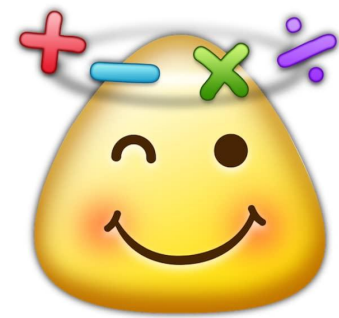
Reciprocal of  $\frac{18}{35} = \frac{35}{18}$



$$= \frac{\cancel{6}}{\cancel{7}} \times \frac{\overset{5}{\cancel{35}}}{\underset{3}{\cancel{18}}}$$
$$= \frac{5}{3} = 1 \frac{2}{3}$$



# EXERCISE : 9 D



## 1. Divide:

a.  $\frac{35}{44} \div 70$

$$= \frac{\cancel{35} \times 1}{44 \times \cancel{70}} = \frac{1}{88}$$

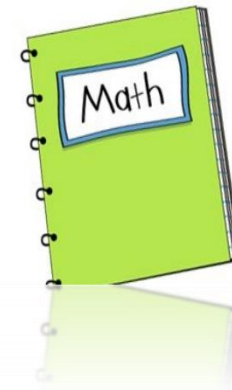
2

b.  $\frac{12}{13} \div 15$

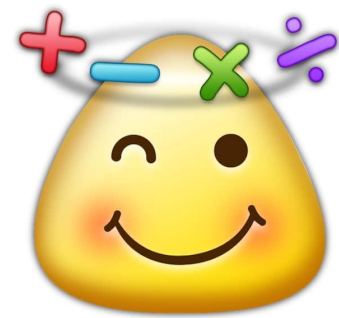
$$= \frac{\overset{4}{\cancel{12}} \times 1}{13 \times \cancel{15}} = \frac{4}{65}$$

5

## Division of Fractions



# EXERCISE : 9 D



## 1. Divide:

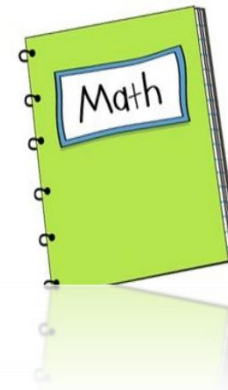
c.  $\frac{8}{13} \div \frac{2}{13}$

$$= \frac{4 \cancel{8} \times \cancel{13}}{\cancel{13} \times \cancel{2}} = 4$$

d.  $\frac{5}{12} \div \frac{10}{21}$

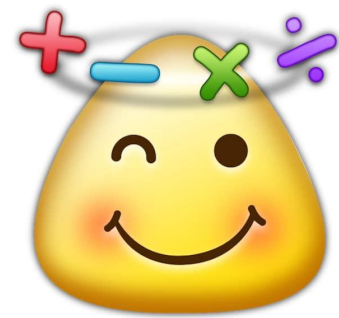
$$= \frac{\cancel{5} \times \cancel{21}^7}{\cancel{12}_4 \times \cancel{10}_2} = \frac{7}{8}$$

## Division of Fractions





# EXERCISE : 9 D



## 1. Divide:

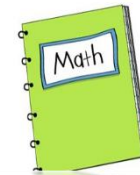
$$j. \quad \frac{3}{4} \div \frac{1}{2} \div \frac{6}{7}$$

$$= \frac{\cancel{3} \times \cancel{2} \times 7}{\cancel{4} \times 1 \times \cancel{6}} = \frac{7}{4} = 1 \frac{3}{4}$$

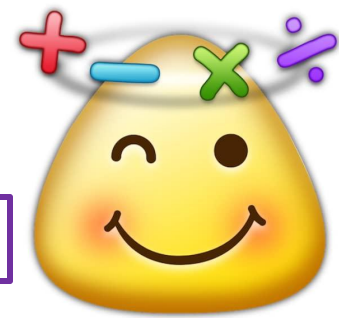
$$k. \quad 2 \frac{1}{4} \div 1 \frac{3}{10} \div \frac{3}{13} = \frac{9}{4} \div \frac{13}{10} \div \frac{3}{13}$$

$$= \frac{\overset{3}{\cancel{9}} \times \overset{5}{\cancel{10}} \times \cancel{13}}{\cancel{4} \times \cancel{13} \times \cancel{3}} = \frac{15}{2} = 7 \frac{1}{2}$$

Division of Fractions



# EXERCISE : 9 D



2. Find the quotient in its simplest form

a.

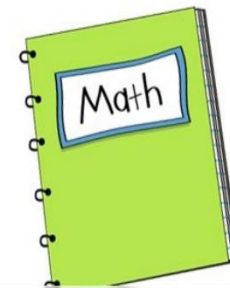
$$\frac{\frac{3}{5}}{\frac{7}{10}} = \frac{3}{\cancel{5}} \times \frac{\overset{2}{10}}{7} = \frac{6}{7}$$

b.

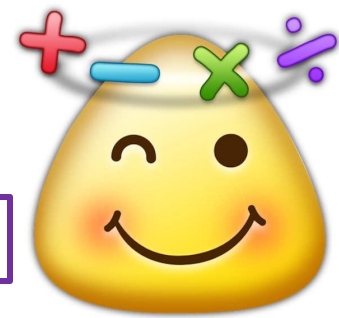
$$\frac{\frac{5}{16}}{\frac{9}{14}} = \frac{5}{\cancel{16}_8} \times \frac{\overset{7}{14}}{9} = \frac{35}{72}$$

Reciprocal of  $\frac{7}{10} = \frac{10}{7}$

## Division of Fractions



# EXERCISE : 9 D



2. Find the quotient in its simplest form

c  $\frac{8}{15}$

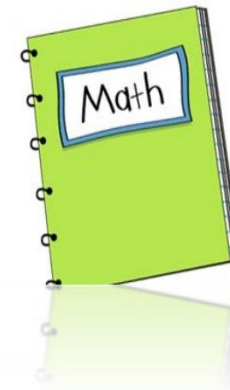
$\frac{35}{36}$

$$= \frac{8}{15} \times \frac{36}{35} = \frac{96}{175}$$

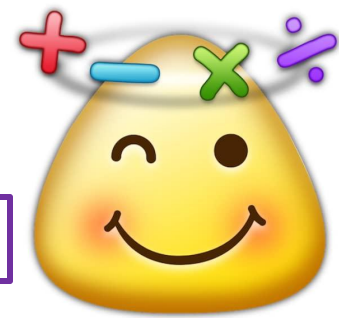
d  $\frac{12}{17}$

$$= \frac{12}{17} \times \frac{1}{5} = \frac{12}{85}$$

## Division of Fractions



# EXERCISE : 9 D



2. Find the quotient in its simplest form

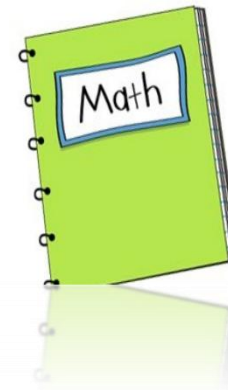
$$j \quad \frac{10}{1 \frac{2}{3}} = \frac{10}{1} \div \frac{5}{3}$$

$$= \frac{\overset{2}{\cancel{10}}}{1} \times \frac{3}{\cancel{5}} = 6$$

$$k \quad \frac{24}{3 \frac{1}{3}} = \frac{24}{1} \div \frac{10}{3}$$

$$= \frac{\overset{12}{\cancel{24}}}{1} \times \frac{3}{\cancel{10}_5} = \frac{36}{5} = 7 \frac{1}{5}$$

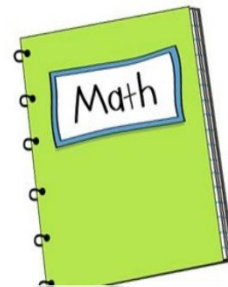
## Division of Fractions





- **Complete exercise 9 D Q.No.1 and 2 in the notebook.**

## Division of Fractions





# Learning Outcomes

**Students are able to divide a fraction by another fraction and reduce the same to its lowest term.**

**THANKING YOU**  
**ODM EDUCATIONAL GROUP**