

Jender Heart High School ; Sec-33B ; Chandigarh

Class:- V

Date:- 20.05.24

Subject - Mathematics

Teacher:- Ms. Sushma

Ch-4 Fractions

A fraction is part of a whole. It is less than 1 whole thing, but more than '0'.

Every fraction has two parts: a top number and a bottom number.

top number is called the numerator.

bottom number is called the denominator.

$\frac{2}{5}$ → Numerator

→ Denominator

Denominator is the number of parts a whole is divided into.

You'd read $\frac{1}{8}$ as : one-eighth.

$\frac{1}{2}$ → One - half

$\frac{1}{3}$ → One - third

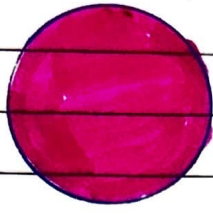
$\frac{1}{4}$ → One-fourth or
a quarter

$\frac{1}{10}$ → one-tenth

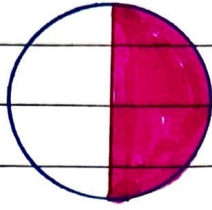
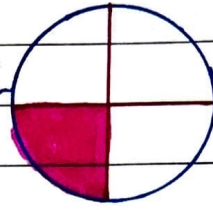
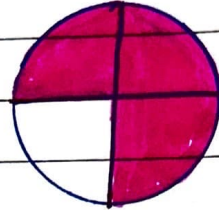
$\frac{1}{12}$ → one-Twelfth

$\frac{1}{100}$ → one hundredth

 Fraction is derived from the Latin word "fractus" which means "a part of" or "broken".

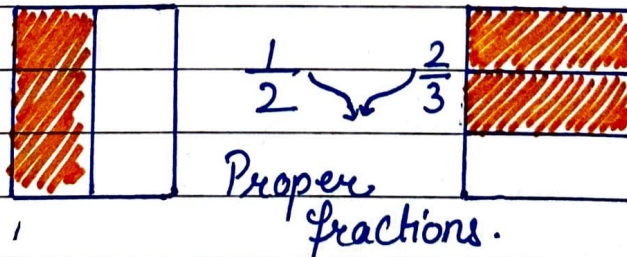


1

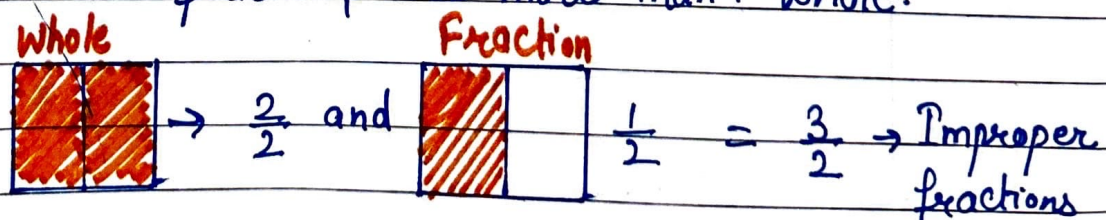
 $\frac{1}{2}$  $\frac{1}{4}$  $\frac{3}{4}$

Types of Fractions

1. Like Fractions:- Like fractions have the same denominator. eg:- $\frac{3}{5}, \frac{7}{5}, \frac{9}{5}$
2. Unlike Fractions:- Unlike fractions have different denominators. eg:- $\frac{1}{4}, \frac{2}{7}, \frac{5}{4}$
3. Proper Fractions:- Proper fractions are the fractions that are less than 1 whole. In proper fractions, the numerator is always less than the denominator.

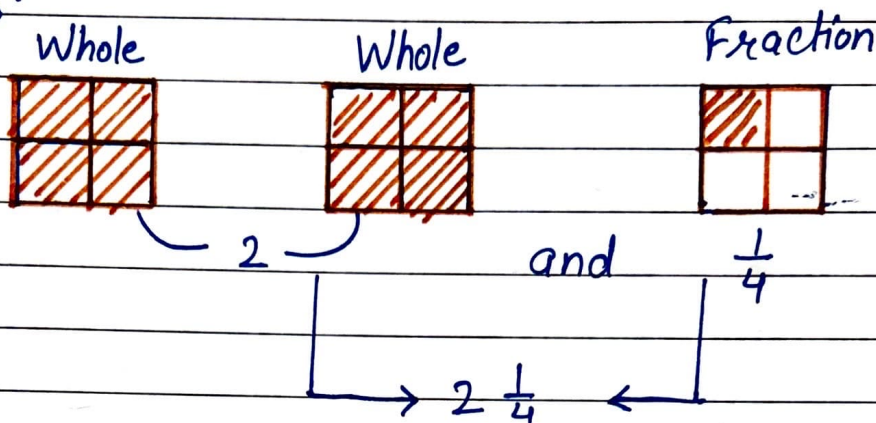


4. Improper Fractions: are the fractions in which the numerator is always greater than the denominator. Improper fractions are more than 1 whole.



Mixed fractions $\rightarrow$ are the fractions that are made up of whole numbers and proper fractions.

Improper fractions can also be written as mixed numbers.



Changing improper fractions to mixed numbers.

$$\frac{\text{Numerator}}{\text{Denominator}} = \text{Whole number} \frac{\text{New numerator}}{\text{Denominator}}$$

Changing mixed numbers to improper fractions.

$$\text{Whole number} \frac{\text{Numerator}}{\text{Denominator}} = \frac{\text{Whole no} \times \text{Denominator} + \text{Numerator}}{\text{Denominator}}$$

Exercise 4.1

Q1 Convert each improper fraction to a mixed fraction.

$$1. \quad \frac{16}{7} = 2 \frac{2}{7}$$

$$\begin{array}{r} 2 \\ 7 \overline{) 16} \\ \underline{- 14} \\ 2 \end{array}$$

$$2. \quad \frac{54}{11} = Q \frac{R}{D} = 4 \frac{10}{11} \quad \begin{array}{r} 4 \\ 11 \overline{) 54} \\ \underline{-44} \\ 10 \end{array}$$

$$3. \quad \frac{19}{2} = Q \frac{R}{D} = 9 \frac{1}{2} \quad \begin{array}{r} 9 \\ 2 \overline{) 19} \\ \underline{-18} \\ 01 \end{array}$$

$$4. \quad \frac{44}{8} = Q \frac{R}{D} = 5 \frac{4}{8} \quad \begin{array}{r} 5 \\ 8 \overline{) 44} \\ \underline{-40} \\ 4 \end{array}$$

$$5. \quad \frac{64}{9} = Q \frac{R}{D} = 7 \frac{1}{9} \quad \begin{array}{r} 7 \\ 9 \overline{) 64} \\ \underline{-63} \\ 1 \end{array}$$

D. Convert each mixed fraction to an improper fraction.

$$(i) \quad 4 \frac{2}{9} = \frac{4 \times 9 + 2}{9} = \frac{38}{9}$$

$$(ii) \quad 6 \frac{1}{5} = \frac{6 \times 5 + 1}{5} = \frac{31}{5}$$

$$(iii) \quad 1 \frac{11}{12} = \frac{1 \times 12 + 11}{12} = \frac{23}{12}$$

$$(iv) \quad 9 \frac{3}{4} = \frac{9 \times 4 + 3}{4} = \frac{39}{4}$$

$$(v) \quad 2 \frac{5}{7} = \frac{2 \times 7 + 5}{7} = \frac{14 + 5}{7} = \frac{19}{7}$$