

Chapter- 9

Fractions

WORKSHEET

1. Fill in the blanks :

- a) Fractions with different denominators are unlike fractions.
- b) A mixed number is a combination of a whole number and a proper fraction.
- c) A fraction greater than 1 is always a/an improper fraction.
- d) In $\frac{17}{18}$, the numerator is 17.
- e) The lowest term of $\frac{10}{10}$ is 1.
- f) 5, one-fifth make a whole.
- g) There are 9 halves in $4\frac{1}{2}$.
- h) A proper fraction is always less than 1.
- i) Fractions with the same denominator are like fractions.
- j) The numbers such as half, one-third, one-fourth, two-fifth, five-sixth etc. are called Rational numbers.

2. Do as directed :

- a) Find: $\frac{3}{5}$ of 25.

$$\text{Ans. } \frac{25}{1} \times \frac{3}{5} = \frac{125}{3} = 41\frac{2}{3}$$

- b) Express $\frac{19}{2}$ as mixed number.

$$\text{Ans. } \frac{2 \overline{)19}}{18} = 9\frac{1}{2}$$

- c) Express $6\frac{2}{9}$ as improper fraction.

$$\begin{aligned} \text{Ans. } 6 \times 9 + 2 &= 56 \\ &= \frac{56}{9} \end{aligned}$$

d) Compare and put the correct symbol. (<, > or =)

$$\frac{3}{4} \bigcirc \frac{2}{5}$$

$$\begin{aligned} \text{Ans. } & \frac{3 \times 5}{4 \times 5} \bigcirc \frac{2 \times 4}{5 \times 4} \\ & = \frac{15}{20} \bigcirc \frac{8}{20} \\ & = \frac{3}{4} \bigcirc \frac{2}{5} \end{aligned}$$

$$\begin{array}{r} 2 \overline{) 4,5} \\ \underline{2} \\ 2 \\ \underline{2} \\ 0 \\ 5 \\ \underline{5} \\ 0 \\ 1,1 \\ \underline{1} \\ 0 \end{array}$$

L.C.M. = 20

e) Reduce $\frac{18}{42}$ to its lowest form.

$$\begin{aligned} \text{Ans. } & \frac{18}{42} = \frac{\cancel{18}^9}{\cancel{42}_7} = \frac{3}{7} \end{aligned}$$

3. Solve as per the given instructions:

a) Add: $2\frac{5}{13} + \frac{7}{13} + 3\frac{9}{26}$

$$\begin{aligned} \text{Ans. } & \frac{41}{13} + \frac{7}{13} + \frac{87}{26} \\ & = \frac{41 \times 2}{13 \times 2} + \frac{7 \times 2}{13 \times 2} + \frac{87 \times 1}{26 \times 1} \\ & = \frac{82}{26} + \frac{14}{26} + \frac{87}{26} = \frac{183}{26} = 7\frac{1}{26} \end{aligned}$$

$$\begin{array}{r} 13 \overline{) 13,26} \\ \underline{13} \\ 0 \\ 2 \\ \underline{2} \\ 0 \\ 1,1 \\ \underline{1} \\ 0 \end{array}$$

L.C.M. = 26

b) Subtract $5\frac{7}{9}$ from $9\frac{5}{7}$

$$\begin{aligned} \text{Ans. } & \frac{68}{7} - \frac{53}{9} \\ & = \frac{68 \times 9}{7 \times 9} - \frac{53 \times 7}{9 \times 7} \\ & = \frac{612}{63} - \frac{371}{63} = \frac{241}{63} = 3\frac{52}{63} \end{aligned}$$

$$\begin{array}{r} 7 \overline{) 7,9} \\ \underline{7} \\ 0 \\ 9 \\ \underline{9} \\ 0 \\ 1,3 \\ \underline{1} \\ 0 \end{array}$$

L.C.M. = 63

c) Multiply: $\frac{2}{5} \times \frac{3}{4} \times \frac{1}{2}$

$$\begin{aligned} \text{Ans. } & \frac{2}{5} \times \frac{3}{4} \times \frac{1}{2} \\ & = \frac{3}{20} \end{aligned}$$

d) Simplify: $\frac{3}{5} + \frac{1}{2} - \frac{3}{4}$

$$\begin{aligned} \text{Ans. } & \frac{3 \times 4}{5 \times 4} + \frac{1 \times 10}{2 \times 10} - \frac{3 \times 5}{4 \times 5} \\ & = \frac{12}{20} + \frac{10}{20} - \frac{15}{20} \\ & = \frac{22}{20} - \frac{15}{20} = \frac{7}{20} \end{aligned}$$

$$\begin{array}{r} 2 \overline{) 5, 2, 4} \\ 5 \overline{) 5, 1, 2} \\ 2 \overline{) 1, 1, 2} \\ \quad 1, 1, 1 \\ \hline \text{L.C.M.} = 20 \end{array}$$

e) A ribbon measuring $3\frac{1}{2}$ m is cut into 7 pieces. What is the length of each piece?

Ans. A ribbon measuring $= 3\frac{1}{2} = \frac{7}{2}$

Pieces cutted = 7

$$\text{Length of each piece} = \frac{7}{2} \div 7 = \frac{7}{2} \times \frac{1}{7} = \frac{1}{2} \text{ m}$$

Hence, The length of each piece ribbon is $\frac{1}{2}$ m.

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