

27/06/2021

# CLASS- 5<sup>TH</sup>



## Ex. 3.4.

(a) Add the following:

$$\frac{5}{9} + \frac{3}{18}$$

$$\begin{array}{r|l}
 2 & 9, 18 \\
 \hline
 9 & 9, 9 \\
 \hline
 & 1, 1
 \end{array}$$

LCM of 9 and 18 is 18

$$\therefore \frac{5 \times 2}{9 \times 2} = \frac{10}{18} \text{ and } \frac{3 \times 1}{18 \times 1} = \frac{3}{18} \quad [2 \times 9 = 18] = \text{LCM}$$

$$\therefore \frac{10}{18} + \frac{3}{18} = \frac{10+3}{18} = \frac{13}{18}$$

(b)  $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$

$$\begin{array}{r|l}
 2 & 2, 3, 6 \\
 \hline
 3 & 1, 3, 3 \\
 \hline
 & 1, 1, 1
 \end{array}$$

LCM of 2, 3 and 6 is 6

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

LCM = 2 x 3 = 6

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

(d)  $\frac{5}{6} + \frac{5}{12} + \frac{9}{24}$

$$\begin{array}{r|l}
 2 & 6, 12, 24 \\
 \hline
 2 & 3, 6, 12 \\
 \hline
 2 & 3, 3, 6 \\
 \hline
 3 & 3, 3, 3 \\
 \hline
 & 1, 1, 1
 \end{array}$$

LCM = 24

$$= \frac{5 \times 4}{6 \times 4} + \frac{5 \times 2}{12 \times 2} + \frac{9 \times 1}{24 \times 1}$$

LCM = 2 x 2 x 2 x 3 = 24

$$= \frac{20}{24} + \frac{10}{24} + \frac{9}{24}$$

$$= \frac{20+10+9}{24} = \frac{39}{24} = \frac{13}{8}$$

$$(e) \quad 3\frac{1}{5} + 4\frac{7}{2}$$

$$= \frac{16}{5} + \frac{15}{2}$$

$$\times \text{LCM} = 10$$

$$= \frac{16 \times 2}{5 \times 2} + \frac{15 \times 5}{2 \times 5}$$

$$= \frac{32}{10} + \frac{75}{10} = \frac{32+75}{10} = \frac{107}{10} = 10\frac{7}{10}$$

$$\begin{array}{r|l} 2 & 5, 2 \\ \hline 5 & 5, 1 \\ & 1, 1 \end{array}$$

$$\text{LCM} = 2 \times 5 = 10$$

$$(g) \quad \frac{9}{4} + \frac{1}{4} = \frac{9+1}{4} = \frac{10}{4} = 2\frac{1}{2}$$

$$(h) \quad \frac{9}{14} + \frac{3}{14} = \frac{9+3}{14} = \frac{12}{14} = \frac{6}{7}$$

Q2- Subtract the following.

$$(a) \quad \frac{11}{15} - \frac{4}{15} = \frac{11-4}{15} = \frac{7}{15}$$

$$(b) \quad \frac{13}{21} - \frac{9}{21} = \frac{13-9}{21} = \frac{4}{21}$$

$$(d) \quad \frac{3}{4} - \frac{1}{2}$$

$$\text{LCM} = 4$$

$$= \frac{3 \times 1}{4 \times 1} - \frac{1 \times 2}{2 \times 2}$$

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

$$\begin{array}{r|l} 2 & 4, 2 \\ \hline 2 & 2, 1 \\ & 1, 1 \end{array}$$

$$\text{LCM} = 4$$

$$(e) \quad 1\frac{7}{18} - \frac{2}{3}$$

$$\text{LCM} = 18$$

$$= \frac{17 \times 1}{18 \times 1} - \frac{2 \times 6}{3 \times 6}$$

$$= \frac{17}{18} - \frac{12}{18} = \frac{17-12}{18} = \frac{5}{18}$$

$$\begin{array}{r|l} 2 & 18, 3 \\ \hline 3 & 9, 3 \\ \hline 3 & 3, 1 \\ \hline & 1, 1 \end{array}$$

$$\text{LCM} = 2 \times 3 \times 3 = 18$$

$$(g) \quad 4\frac{1}{2} - 2\frac{7}{10}$$

$$= \frac{9}{2} - \frac{27}{10}$$

$$= \frac{9 \times 5}{2 \times 5} - \frac{27 \times 1}{10 \times 1}$$

$$= \frac{45}{10} - \frac{27}{10} = \frac{45-27}{10} = \frac{18}{10} = \frac{9}{5} = 1\frac{4}{5}$$

$$\begin{array}{r|l} 2 & 2, 10 \\ \hline 5 & 1, 5 \\ \hline & 1, 1 \end{array}$$

$$\text{LCM} = 2 \times 5 = 10$$

$$(h) \quad 5\frac{2}{3} - 3$$

$$= \frac{17}{3} - \frac{3}{1}$$

$$= \frac{17 \times 1}{3 \times 1} - \frac{3 \times 3}{1 \times 3}$$

$$= \frac{17}{3} - \frac{9}{3} = \frac{17-9}{3} = \frac{8}{3} = 2\frac{2}{3}$$

Note: Do Ex. 3.4. Q1. (d), (f) and (h) and Q2. (c), (f), (h) parts in homework.