

2- Subtract.

$$a - \frac{8}{18} - \frac{4}{9}$$

$$\boxed{L.C.M = 45}$$

$$\frac{3 \times 8 - 5 \times 4}{45} = \frac{24 - 20}{45} = \frac{4}{45}$$

$$b - \frac{11}{13} - \frac{5}{7}$$

$$\boxed{L.C.M = 91}$$

$$\frac{7 \times 11 - 13 \times 5}{91} = \frac{77 - 65}{91} = \frac{12}{91}$$

$$c - \frac{13}{17} - \frac{7}{10}$$

$$\boxed{L.C.M = 170}$$

$$\frac{10 \times 13 - 17 \times 7}{170} = \frac{130 - 119}{170} = \frac{11}{170}$$

d- $\frac{15}{19} - \frac{9}{13}$

L.C.M. = 247

$$\frac{13 \times 15 - 19 \times 9}{247} = \frac{195 - 171}{247} = \frac{24}{247}$$

e- $\frac{7}{9} - \frac{4}{15}$

L.C.M. = 45

$$\frac{5 \times 7 - 3 \times 4}{45} = \frac{35 - 12}{45} = \frac{23}{45}$$

2. Subtract

$$P. \quad \frac{16}{27} - \frac{7}{18}$$

$$\boxed{\text{L.C.M.} = 54}$$

$$\frac{2 \times 16}{54} - \frac{3 \times 7}{54} = \frac{32 - 21}{54} = \frac{11}{54}$$

$$Q. \quad 13 \frac{7}{9} - 8 \frac{5}{12} = \frac{124}{9} - \frac{101}{12}$$

$$\boxed{\text{L.C.M.} = 36}$$

$$\frac{4 \times 124}{36} - \frac{3 \times 101}{36} = \frac{496 - 303}{36} = \frac{193}{36}$$

$$b. \frac{63}{17} - 4 = \frac{105}{17} - 4$$

L.C.M = 17

$$\frac{1 \times 105}{17} = \frac{105}{17} - \frac{63}{17} = \frac{23}{17}$$

$$i. \frac{30}{4} - 25 = \frac{120}{4} - 25$$

L.C.M = 4

$$\frac{1 \times 120}{4} = \frac{120}{4} - 25 = \frac{30}{4} = \frac{5}{4}$$

$$j. \frac{20}{12} - 15 = \frac{240}{12} - 15$$

L.C.M = 12

$$\frac{1 \times 240}{12} = \frac{240}{12} - 15 = \frac{20}{12} = \frac{5}{3}$$

$$k. \frac{12}{8} - 11\frac{1}{2} = \frac{103}{8} - \frac{93}{2}$$

L.C.M = 8

$$\frac{1 \times 103 - 4 \times 93}{8} = \frac{103 - 372}{8} = \frac{-269}{8}$$

$$l. 100\frac{1}{4} - 99 = \frac{401}{4} - 99$$

L.C.M = 4

$$\frac{1 \times 401}{4} = \frac{401}{4} - 99 = \frac{1}{4}$$

Q. 3-9-21

Ex. 9.B

3-Simplify

$$a - \frac{7}{12} + \frac{9}{12} - \frac{5}{12}$$

$$\text{Sol} \quad \frac{7+9-5}{12} = \frac{11}{12}$$

$$b - \frac{9}{10} - \frac{3}{5} + \frac{7}{8} = \frac{9}{10} + \frac{7}{8} - \frac{3}{5}$$

$$\text{Sol} = \frac{4 \times 9 + 5 \times 7 - 8 \times 3}{40} = \frac{36 + 35 - 24}{40} = \frac{47}{40}$$

$$c - \frac{5}{12} - \frac{2}{3} - \frac{1}{2} + 7 = \frac{5}{12} + 7 - \frac{2}{3} - \frac{1}{2}$$

~~$$\frac{1 \times 5 + 4 \times 2 - 2 \times 6 + 1}{12} = \frac{5 + 8 - 6}{12}$$~~
$$\frac{5 + 7 \times 12 - 2 \times 4 - 1}{12}$$

$$\text{Sol} - \frac{5 + 84 - 8 - 6}{12} = \frac{89 - 14}{12} = \frac{75}{12}$$

$$d - \frac{1}{2} + \frac{3}{4} - \frac{5}{8} - \frac{1}{16}$$

$$\text{Sol} - \frac{8 \times 1 + 4 \times 3 - 2 \times 5 - 1 \times 1}{16} = \frac{8 + 12 - 10 - 1}{16}$$

$$= \frac{9}{16}$$

$$e- 8\frac{3}{4} + 7\frac{1}{2} - 3\frac{1}{4} - 2\frac{1}{2} = \frac{35}{4} + \frac{15}{2} - \frac{13}{4} - \frac{5}{2}$$

L.C.M = 4

$$\text{Sol} - \frac{1 \times 35 + 2 \times 15 - 1 \times 13 - 2 \times 5}{4} = \frac{35 + 30 - 13 - 10}{4} = \frac{42}{4}$$

$$f- 10\frac{5}{6} - 7\frac{2}{3} + 8\frac{1}{3} - 5\frac{1}{2} = 10\frac{5}{6} + \frac{25}{3} - \frac{23}{3} - \frac{11}{2}$$

L.C.M = 6

$$\text{Sol} = \frac{1 \times 65 + 2 \times 25 - 2 \times 23 - 3 \times 11}{6} = \frac{65 + 50 - 46 - 33}{6} = \frac{36}{6} = 6$$

~~Ex-9.21~~

Ex-9.13

3- Simplify.

$$g- 5\frac{5}{12} + 6 + 8 - 5\frac{3}{6} = \frac{65}{12} + 8 - \frac{6}{1} - \frac{28}{4}$$

L.C.M = 60

$$\text{Sol} = \frac{5 \times 65 + 60 \times 8 - 60 \times 6 - 12 \times 28}{60} = \frac{325 + 480 - 360 - 336}{60} = \frac{109}{60} = 1\frac{49}{60}$$

$$b. \quad 10\frac{1}{4} + 6\frac{3}{8} - 15 + 1\frac{1}{2} = \frac{41}{4} + \frac{51}{8} + \frac{3}{2} - \frac{15}{1} \quad \text{L.C.M.} = 8$$

$$\text{Sol} = \frac{2 \times 41 + 8 \times 51 + 4 \times 3 - 8 \times 15}{8} = \frac{82 + 51 + 12 - 120}{8} = \frac{25}{8} = 3\frac{1}{8}$$

$$i. \quad 25 - 20\frac{1}{2} + 15\frac{3}{5} - 5 = \frac{25}{1} + \frac{78}{5} - \frac{41}{2} - \frac{5}{1} \quad \text{L.C.M.} = 10$$

$$\text{Sol} = \frac{25 \times 10 + 2 \times 78 - 5 \times 41 - 10 \times 5}{10} = \frac{250 + 156 - 205 - 50}{10} = \frac{151}{10} = 15\frac{1}{10}$$

$$j. \quad \frac{9}{14} - 1\frac{2}{7} + 4\frac{3}{7} = \frac{9}{21} - \frac{9}{14} + \frac{31}{7} - \frac{9}{7} - \frac{23}{21} \quad \text{L.C.M.} = 42$$

$$\frac{3 \times 9 + 6 \times 31 - 6 \times 9 - 2 \times 23 - 27 + 186 - 54 - 46}{42} = \frac{113}{42}$$