Exercise 5F

Q1

Answer :

Difference of like fractions = Difference of numerator ÷ Common denominator

$$\frac{5}{8} - \frac{1}{8} = \frac{(5-1)}{8} = \frac{\cancel{4}^{1}}{\cancel{8}_{2}} = \frac{1}{2}$$

Q2

Answer :

Difference of like fractions = Difference of numerator ÷ Common denominator

$$\frac{7}{12} - \frac{5}{12} = \frac{(7-5)}{12} = \frac{\cancel{2}^{1}}{\cancel{12}_{6}} = \frac{1}{6}$$

Q3

Answer :

Difference of like fractions = Difference of numerator ÷ Common denominator

$$4\frac{3}{7} - 2\frac{4}{7} = \frac{31}{7} - \frac{18}{7}$$
$$= \frac{(31-18)}{7}$$
$$= \frac{13}{7}$$

Q4

Answer :

$$\frac{5}{6} - \frac{4}{9}$$

$$
\begin{array}{c|c}
3 & 6,\ 9 \\
\hline
2 & 2,\ 3 \\
\hline
3 & 1,\ 3 \\
\hline
 & 1,\ 1 \\
\hline
\end{array}
$$

L.C.M. of 6 and 9 = (3 × 2 × 3) = 18

Now, we have:

$$\frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18} \ ; \ \frac{4}{9} = \frac{4 \times 2}{9 \times 2} = \frac{8}{18}$$

$$\therefore \ \frac{5}{6} - \frac{4}{9} = \frac{15}{18} - \frac{8}{18} = \frac{(15-8)}{18} = \frac{7}{18}$$

Q5

Answer :

$$\frac{1}{2} - \frac{3}{8}$$

L.C.M. of 2 and 8 = (2 × 2 × 2) = 8

Now, we have:

$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

$$\therefore \ \frac{1}{2} - \frac{3}{8} = \frac{4}{8} - \frac{3}{8} = \frac{(4-3)}{8} = \frac{1}{8}$$

Q6

Answer :

$\frac{5}{8} - \frac{7}{12}$

2	8, 12
2	4, 6
2	2, 3
3	1, 3
	1, 1

L.C.M. of 8 and 12 = (2 × 2 × 2 × 3) = 24

Now, we have:

$\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$; $\frac{7}{12} = \frac{7 \times 2}{12 \times 2} = \frac{14}{24}$

$\therefore \frac{5}{8} - \frac{7}{12} = \frac{15}{24} - \frac{14}{24} = \frac{(15 - 14)}{24} = \frac{1}{24}$

Q7

Answer :

$2\frac{7}{9} - 1\frac{8}{15}$

$= \frac{25}{9} - \frac{23}{15}$

3	9, 15
3	3, 5
5	1, 5
	1, 1

L.C.M. of 9 and 15 $= \left(3 \times 3 \times 5 \right) = 45$

$\therefore \frac{25}{9} - \frac{23}{15} = \frac{(125 - 69)}{45} = \frac{56}{45} = 1\frac{11}{45}$

$\{[45 \div 9 = 5, 5 \times 25 = 125]$ **and** $[45 \div 15 = 3, 3 \times 23 = 69]\}$

********** END *********