



Exercise 5D

Now, we convert $\frac{4}{5}$ into an equivalent fraction having 10 as the denominator as the other fraction has already 10 as its denominator.

$$\therefore \frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10}$$

$$\text{Clearly, } \frac{8}{10} > \frac{7}{10}$$

$$\therefore \frac{4}{5} > \frac{7}{10}$$

Q16

Answer :

L.C.M. of 8 and 10 = $(2 \times 5 \times 2 \times 2) = 40$

Now, we convert $\frac{7}{8}$ **and** $\frac{9}{10}$ into equivalent fractions having 40 as the denominator.

$$\therefore \frac{7}{8} = \frac{7 \times 5}{8 \times 5} = \frac{35}{40} \text{ and } \frac{9}{10} = \frac{9 \times 4}{10 \times 4} = \frac{36}{40}$$

$$\text{Clearly, } \frac{35}{40} < \frac{36}{40}$$

$$\therefore \frac{7}{8} < \frac{9}{10}$$

Q17

Answer :

L.C.M. of 12 and 15 = $(2 \times 2 \times 3 \times 5) = 60$

Now, we convert $\frac{11}{12}$ **and** $\frac{13}{15}$ into equivalent fractions having 60 as the denominator.

$$\therefore \frac{11}{12} = \frac{11 \times 5}{12 \times 5} = \frac{55}{60} \text{ and } \frac{13}{15} = \frac{13 \times 4}{15 \times 4} = \frac{52}{60}$$

$$\text{Clearly, } \frac{55}{60} > \frac{52}{60}$$

$$\therefore \frac{11}{12} > \frac{13}{15}$$

Q18

Answer :

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

The given fractions are $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{6}$ **and** $\frac{7}{8}$.

L.C.M. of 2, 4, 6 and 8 = $(2 \times 2 \times 2 \times 3) = 24$

We convert each of the given fractions into an equivalent fraction with denominator 24.

Now, we have:

$$\frac{1}{2} = \frac{1 \times 12}{2 \times 12} = \frac{12}{24}, \quad \frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$$

$$\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}, \quad \frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}$$

Clearly, $\frac{12}{24} < \frac{18}{24} < \frac{20}{24} < \frac{21}{24}$

$$\therefore \frac{1}{2} < \frac{3}{4} < \frac{5}{6} < \frac{7}{8}$$

Hence, the given fractions can be arranged in the ascending order as follows:

$$\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{7}{8}$$

Q19

Answer :

The given fractions are $\frac{2}{3}, \frac{5}{6}, \frac{7}{9}$ and $\frac{11}{18}$.

$$\begin{array}{r|l} 3 & 3, 6, 9, 18 \\ \hline 3 & 1, 2, 3, 6 \\ \hline 2 & 1, 2, 1, 2 \\ \hline & 1, 1, 1, 1 \end{array}$$

L.C.M. of 3, 6, 9 and 18 = $(3 \times 2 \times 3) = 18$

So, we convert each of the fractions whose denominator is not equal to 18 into an equivalent fraction with denominator 18.

Now, we have:

$$\frac{2}{3} = \frac{2 \times 6}{3 \times 6} = \frac{12}{18}, \quad \frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18}, \quad \frac{7}{9} = \frac{7 \times 2}{9 \times 2} = \frac{14}{18}$$

Clearly, $\frac{11}{18} < \frac{12}{18} < \frac{14}{18} < \frac{15}{18}$

$$\therefore \frac{11}{18} < \frac{2}{3} < \frac{7}{9} < \frac{5}{6}$$

Hence, the given fractions can be arranged in the ascending order as follows:

$$\frac{11}{18}, \frac{2}{3}, \frac{7}{9}, \frac{5}{6}$$

Q20

Answer :

The given fractions are $\frac{2}{5}, \frac{7}{10}, \frac{11}{15}$ and $\frac{17}{30}$.

L.C.M. of 5, 10, 15 and 30 = $(2 \times 5 \times 3) = 30$

$$\begin{array}{r|l} 5 & 5, 10, 15, 30 \\ \hline 2 & 1, 2, 3, 6 \\ \hline 3 & 1, 1, 3, 3 \\ \hline & 1, 1, 1, 1 \end{array}$$

So, we convert each of the fractions whose denominator is not equal to 30 into an equivalent fraction

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