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.

$\therefore \frac{4}{5} = \frac{4\times2}{5\times2} = \frac{8}{10}$

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

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

Q16

Answer :

L.C.M. of 8 and 10 = (2 × 5 × 2 × 2) = 40

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

$\therefore \frac{7}{8} = \frac{7\times5}{8\times5} = \frac{35}{40}$ and $\frac{9}{10} = \frac{9\times4}{10\times4} = \frac{36}{40}$

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

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

Q17

Answer :

L.C.M. of 12 and 15 = (2 × 2 × 3 × 5) = 60

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

$\therefore \frac{11}{12} = \frac{11\times5}{12\times5} = \frac{55}{60}$ and $\frac{13}{15} = \frac{13\times4}{15\times4} = \frac{52}{60}$

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 × 2 × 2 × 3) = 24

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

Now, we have:

$\frac{1}{2} = \frac{1\times12}{2\times12} = \frac{12}{24}; \frac{3}{4} = \frac{3\times6}{4\times6} = \frac{18}{24}$

$\frac{5}{6} = \frac{5\times4}{6\times4} = \frac{20}{24}; \frac{7}{8} = \frac{7\times3}{8\times3} = \frac{21}{24}$

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 $\frac{11}{18}$.

3	3,6,9,18
3	1,2,3,6
2	1,2,1,2
	1,1,1,1

L.C.M. of 3, 6, 9 and 18 = (3 × 2 × 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:

$\frac{2}{3} = \frac{2\times6}{3\times6} = \frac{12}{18}; \frac{5}{6} = \frac{5\times3}{6\times3} = \frac{15}{18}; \frac{7}{9} = \frac{7\times2}{9\times2} = \frac{14}{18}$

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 × 5 × 3) = 30

5	5,10,15,30
2	1,2,3,6
3	1,1,3,3
	1,1,1,1

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

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