Fractions Ex 2.1 Q1

Answer :

First, we need to find the LCM of denominators in each case. After that, we will equate the denominators in order to compare the two fractions.

(i)

LCM of 9 and 13 is 117.

Now make both fraction equivalent with denominator as 117

$\frac{7}{9} = \frac{7}{9} \times \frac{13}{13}$

$\Rightarrow \frac{7}{9} = \frac{91}{117}$

$\frac{8}{13} = \frac{8}{13} \times \frac{9}{9}$

$\Rightarrow \frac{8}{13} = \frac{72}{117}$

we know

$91 > 72$

$\Rightarrow \frac{91}{117} > \frac{72}{117}$

$\Rightarrow \frac{7}{9} > \frac{8}{13}$

(ii)

both fraction have same denominator as 9

we know

$11 > 5$

$\Rightarrow \frac{11}{9} > \frac{5}{9}$

(iii)

LCM of 41 and 30 is 1230

Now convert both fraction to their equivalent fractions with denominator as 1230

$\frac{37}{41} = \frac{37}{41} \times \frac{30}{30}$

$\Rightarrow \frac{37}{41} = \frac{1110}{1230}$

$\frac{19}{30} = \frac{19}{30} \times \frac{41}{41}$

$\Rightarrow \frac{19}{30} = \frac{779}{1230}$

we know

$1110 > 779$

$\Rightarrow \frac{1110}{1230} > \frac{779}{1230}$

$\Rightarrow \frac{37}{41} > \frac{19}{30}$

(iv)

LCM of 15 and 105 is 105.

Now convert fraction to its equivalent fractions with denominator as 105

$\frac{17}{15} = \frac{17}{15} \times \frac{7}{7}$

$\Rightarrow \frac{17}{15} = \frac{119}{105}$

Fractions Ex 2.1 Q2

Answer :

(i)

LCM of the denominators 8, 6, 4 and 3 is 24.

Now, convert all fractions into their equivalent fractions with denominator 24.

$\frac{3}{8} = \frac{3}{8} \times \frac{3}{3}$

$\Rightarrow \frac{3}{8} = \frac{9}{24}$

$\frac{5}{6} = \frac{5}{6} \times \frac{4}{4}$

$\Rightarrow \frac{5}{6} = \frac{20}{24}$

$\frac{6}{8} = \frac{6}{8} \times \frac{3}{3}$

$\Rightarrow \frac{6}{8} = \frac{18}{24}$

$\frac{2}{4} = \frac{2}{4} \times \frac{6}{6}$

$\Rightarrow \frac{2}{4} = \frac{12}{24}$

$\frac{1}{3} = \frac{1}{3} \times \frac{8}{8}$

$\Rightarrow \frac{1}{3} = \frac{8}{24}$

We know :

$8 < 9 < 12 < 18 < 20$

$\Rightarrow \frac{8}{24} < \frac{9}{24} < \frac{12}{24} < \frac{18}{24} < \frac{20}{24}$

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

(ii)

LCM of the denominators 8, 12, 16 and 3 is 48.

Now, convert all fractions into their equivalent fractions with denominator 48.

$\frac{4}{3} = \frac{4}{3} \times \frac{16}{16}$

$\Rightarrow \frac{4}{3} = \frac{64}{48}$

$\frac{3}{8} = \frac{3}{8} \times \frac{6}{6}$

$\Rightarrow \frac{3}{8} = \frac{18}{48}$

$\frac{6}{12} = \frac{6}{12} \times \frac{4}{4}$

$\Rightarrow \frac{6}{12} = \frac{24}{48}$

$\frac{5}{16} = \frac{5}{16} \times \frac{3}{3}$

$\Rightarrow \frac{5}{16} = \frac{15}{48}$

we know

$15 < 18 < 24 < 64$

$\Rightarrow \frac{15}{48} < \frac{18}{48} < \frac{24}{48} < \frac{64}{48}$

$\Rightarrow \frac{5}{16} < \frac{3}{8} < \frac{6}{12} < \frac{4}{3}$

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