

## 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.

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

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

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

both fraction have same denominator as 9

we know 11 > 5

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

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  
⇒ 
$$\frac{1110}{1230}$$
 >  $\frac{779}{1230}$   
⇒  $\frac{37}{41}$  >  $\frac{19}{30}$ 

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

(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:

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

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

Now, convert
$$\frac{3}{8} = \frac{3}{8} \times \frac{3}{3}$$

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

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

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

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

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

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

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

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

$$\begin{array}{l} 3 - \frac{1}{3} \times \frac{8}{3} \\ \Rightarrow \frac{1}{3} = \frac{8}{24} \\ \text{We know}: \\ 8 < 9 < 12 < 18 < 20 \\ \Rightarrow \frac{8}{24} < \frac{9}{24} < \frac{12}{24} < \frac{18}{24} < \frac{20}{24} \\ \Rightarrow \frac{1}{3} < \frac{3}{8} < \frac{2}{4} < \frac{6}{8} < \frac{5}{6} \end{array}$$

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

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

$$\begin{array}{l} \frac{4}{3} = \frac{4}{3} \times \frac{16}{16} \\ \Rightarrow \frac{4}{3} = \frac{64}{48} \\ \frac{3}{8} = \frac{3}{8} \times \frac{6}{6} \\ \Rightarrow \frac{3}{8} = \frac{18}{48} \\ \frac{6}{12} = \frac{6}{12} \times \frac{4}{4} \\ \Rightarrow \frac{6}{12} = \frac{24}{48} \\ \frac{5}{16} = \frac{5}{16} \times \frac{3}{3} \\ \Rightarrow \frac{5}{16} = \frac{15}{48} \\ \text{we know} \\ 15 < 18 < 24 < 64 \\ \Rightarrow \frac{15}{48} < \frac{18}{48} < \frac{24}{48} < \frac{64}{48} \\ \Rightarrow \frac{5}{16} < \frac{3}{8} < \frac{6}{12} < \frac{4}{3} \end{array}$$

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