

Example 5: Add the following fractions:

$$\frac{1}{3} + \frac{1}{4} + \frac{1}{6} + \frac{2}{9}$$

Solution:

$$\frac{1}{3} + \frac{1}{4} + \frac{1}{6} + \frac{2}{9}$$

3	3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39
4	4, 8, 12, 16, 20, 24, 28, 32, 36
6	6, 12, 18, 24, 30, 36
9	9, 18, 27, 36

Lcd = 36. Now change all fractions into equivalent fractions with denominator = 36

$$= \frac{1 \times 12}{3 \times 12} + \frac{1 \times 9}{4 \times 9} + \frac{1 \times 6}{6 \times 6} + \frac{2 \times 4}{9 \times 4}$$

$$= \frac{12}{36} + \frac{9}{36} + \frac{6}{36} + \frac{8}{36}$$

$$= \frac{35}{36}$$

Example 6: Add the fractions:

$$\frac{8}{15} + \frac{5}{12}$$

Solution:

$$\frac{8}{15} + \frac{5}{12}$$

$$= \frac{8 \times 4}{15 \times 4} + \frac{5 \times 5}{12 \times 5}$$

$$= \frac{32}{60} + \frac{25}{60} = \frac{57}{60} = \frac{19}{20}$$

