

Lesson 4.5 Finding Common Denominators

The two fractions $\frac{1}{5}$ and $\frac{3}{5}$ have common denominators. However $\frac{1}{4}$ and $\frac{3}{5}$ do not have common denominators. Rename these fractions so that they have common denominators by finding the least common multiple of their denominators.

Multiples of 4 are 4, 8, 12, 16, 20, 24, . . .

Multiples of 5 are 5, 10, 15, 20, . . .

The smallest number that is a multiple of 4 and 5 is 20.

Rename each fraction with a denominator of 20.

$$\frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}; \frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$$

$\frac{5}{20}$ and $\frac{12}{20}$ have common denominators.

Rename each pair of fractions with common denominators.

a

1. $\frac{1}{4}$ and $\frac{2}{3}$ _____

b

$\frac{3}{8}$ and $\frac{7}{10}$ _____

c

$\frac{4}{7}$ and $\frac{2}{3}$ _____

2. $\frac{3}{8}$ and $\frac{1}{6}$ _____

$\frac{2}{3}$ and $\frac{1}{2}$ _____

$\frac{3}{8}$ and $\frac{5}{6}$ _____

3. $\frac{2}{5}$ and $\frac{1}{3}$ _____

$\frac{5}{16}$ and $\frac{3}{8}$ _____

$\frac{1}{2}$ and $\frac{1}{3}$ _____

4. $\frac{5}{8}$ and $\frac{3}{16}$ _____

$\frac{2}{5}$ and $\frac{3}{4}$ _____

$\frac{5}{12}$ and $\frac{4}{5}$ _____

5. $\frac{5}{9}$ and $\frac{1}{2}$ _____

$\frac{7}{8}$ and $\frac{7}{12}$ _____

$\frac{1}{9}$ and $\frac{2}{3}$ _____