

# Finding Common Denominators

## How to find a common denominator.

Find a common denominator for  $\frac{4}{10}$  and  $\frac{3}{8}$ .

List multiples of the denominators 10 and 8. Then look for a common multiple.

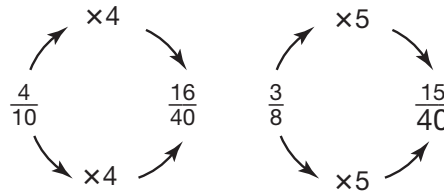
**10:** 10, 20, 30, 40  
**8:** 8, 16, 24, 32, 40

The number 40 can be used as the common denominator.

## How to rename fractions to have the same denominator.

Rename  $\frac{4}{10}$  and  $\frac{3}{8}$  using 40 as the common denominator.

Multiply the numerator and denominator by the same nonzero numbers.



The renamed fractions are  $\frac{16}{40}$  and  $\frac{15}{40}$ .

In **1** through **8**, find a common denominator for each pair of fractions.

1.  $\frac{2}{7}$  and  $\frac{1}{2}$

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

3.  $\frac{3}{4}$  and  $\frac{5}{6}$

4.  $\frac{7}{8}$  and  $\frac{3}{10}$

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

6.  $\frac{1}{9}$  and  $\frac{1}{2}$

7.  $\frac{2}{3}$  and  $\frac{1}{8}$

8.  $\frac{7}{20}$  and  $\frac{4}{15}$

In **9** through **16**, find a common denominator for each pair of fractions. Then rename each fraction in the pair.

9.  $\frac{4}{10}$  and  $\frac{1}{5}$

10.  $\frac{4}{9}$  and  $\frac{4}{6}$

11.  $\frac{1}{2}$  and  $\frac{1}{7}$

12.  $\frac{2}{3}$  and  $\frac{3}{18}$

13.  $\frac{4}{16}$  and  $\frac{2}{3}$

14.  $\frac{1}{6}$  and  $\frac{1}{4}$

15.  $\frac{2}{20}$  and  $\frac{1}{8}$

16.  $\frac{7}{12}$  and  $\frac{7}{15}$

# Finding Common Denominators

In **1** through **8**, find a common denominator for each pair of fractions.

1.  $\frac{2}{5}$  and  $\frac{3}{4}$

2.  $\frac{5}{8}$  and  $\frac{4}{9}$

3.  $\frac{1}{4}$  and  $\frac{4}{7}$

4.  $\frac{5}{12}$  and  $\frac{7}{9}$

5.  $\frac{7}{15}$  and  $\frac{1}{3}$

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

7.  $\frac{2}{9}$  and  $\frac{4}{5}$

8.  $\frac{7}{8}$  and  $\frac{5}{6}$

In **9** through **16**, find a common denominator for each pair of fractions. Then rename each fraction in the pair.

9.  $\frac{3}{12}$  and  $\frac{3}{8}$

10.  $\frac{1}{8}$  and  $\frac{2}{7}$

11.  $\frac{1}{2}$  and  $\frac{2}{9}$

12.  $\frac{1}{3}$  and  $\frac{1}{5}$

13.  $\frac{7}{9}$  and  $\frac{1}{6}$

14.  $\frac{1}{6}$  and  $\frac{3}{4}$

15.  $\frac{7}{8}$  and  $\frac{2}{3}$

16.  $\frac{3}{8}$  and  $\frac{5}{6}$

**17.** Train A arrives at Central Station on the hour and every 12 minutes. Train B arrives on the hour and every 15 minutes. When do both trains arrive at the same time?

- A** On the hour and 30 minutes past the hour
- B** On the hour and 15 minutes to the hour
- C** On the hour and 27 minutes past the hour
- D** On the hour only

**18.** Andrew wants to rename  $\frac{2}{7}$  and  $\frac{3}{4}$  using a common denominator. Which of the following shows these fractions renamed correctly?

- A**  $\frac{8}{28}$  and  $\frac{21}{28}$
- B**  $\frac{2}{28}$  and  $\frac{3}{28}$
- C**  $\frac{4}{28}$  and  $\frac{6}{28}$
- D**  $\frac{2}{7}$  and  $\frac{3}{7}$

**19.** Manuel says that you can use one of the denominators of  $\frac{5}{6}$  and  $\frac{11}{30}$  when renaming these fractions using a common denominator. Why is this true?

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