

# Finding Common Denominators

Grade 5 Math • Section 4.1

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 14

## Quick Review and Helpful Hints

**Common denominator:** A shared multiple of two or more denominators. The **least common denominator (LCD)** is the **least common multiple (LCM)** of the denominators.

**Finding the LCD:** List multiples of each denominator until you find the smallest one they share. LCD of 4 and 6: multiples of 4: 4, 8, 12, ...; multiples of 6: 6, 12, ...  $\Rightarrow$  LCD = 12.

Rewrite each fraction with the LCD as the new denominator.

**Example:** Find the LCD of  $\frac{2}{3}$  and  $\frac{5}{8}$ , then rewrite both fractions.

Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24. Multiples of 8: 8, 16, 24. LCD = 24.  $\frac{2}{3} = \frac{16}{24}$  and  $\frac{5}{8} = \frac{15}{24}$ .

**Answer:** LCD = 24;  $\frac{16}{24}$  and  $\frac{15}{24}$

## Practice Problems

Find the LCD and rewrite each pair of fractions with that denominator.

1.  $\frac{1}{4}$  and  $\frac{1}{6}$  LCD = \_\_\_\_\_

7.  $\frac{7}{12}$  and  $\frac{5}{8}$  LCD = \_\_\_\_\_

2.  $\frac{2}{3}$  and  $\frac{3}{5}$  LCD = \_\_\_\_\_

8.  $\frac{1}{6}$  and  $\frac{4}{9}$  LCD = \_\_\_\_\_

3.  $\frac{3}{8}$  and  $\frac{1}{6}$  LCD = \_\_\_\_\_

9.  $\frac{3}{7}$  and  $\frac{2}{3}$  LCD = \_\_\_\_\_

4.  $\frac{5}{12}$  and  $\frac{1}{4}$  LCD = \_\_\_\_\_

10.  $\frac{5}{6}$  and  $\frac{3}{4}$  LCD = \_\_\_\_\_

5.  $\frac{2}{9}$  and  $\frac{1}{3}$  LCD = \_\_\_\_\_

11.  $\frac{1}{2}$  and  $\frac{3}{8}$  LCD = \_\_\_\_\_

6.  $\frac{3}{10}$  and  $\frac{2}{5}$  LCD = \_\_\_\_\_

12.  $\frac{4}{15}$  and  $\frac{1}{5}$  LCD = \_\_\_\_\_

## Word Problems

13. A recipe calls for  $\frac{2}{3}$  cup of flour and  $\frac{3}{4}$  cup of sugar. To add these, you need a common denominator. Find the LCD of 3 and 4 and rewrite both fractions. \_\_\_\_\_

14. Marco ran  $\frac{5}{6}$  of a mile and Tina ran  $\frac{7}{10}$  of a mile. Find the LCD so you can compare who ran farther. \_\_\_\_\_



## Answer Keys

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

### Step-by-Step Explanations

**1.** Start with the main idea. For finding common denominators, list multiples of 4 and 6; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.

**2.** Keep the work tidy. For finding common denominators, list multiples of 3 and 5; the least common multiple is 15. Always simplify at the end so the answer is clean and useful.

**3.** Look at what the numbers mean. For finding common denominators, list multiples of 8 and 6; the least common multiple is 24. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

**4.** Use the setup first. For finding common denominators, list multiples of 12 and 4; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.

**5.** Check the size of the answer. For finding common denominators, list multiples of 9 and 3; the least common multiple is 9. Always simplify at the end so the answer is clean and useful.

**6.** Match the operation to the words. For finding common denominators, list multiples of 10 and 5; the least common multiple is 10. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

**7.** Write the important values first. For finding common denominators, list multiples of 12 and 8; the least common multiple is 24. Fractions are easier to combine when the pieces are the same size.

**8.** Follow the pattern carefully. For finding common denominators, list multiples of 6 and 9; the least common multiple is 18. Always simplify at the end so the answer is clean and useful.

**9.** Start with the main idea. For finding common denominators, list multiples of 7 and 3; the least common multiple is 21. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

**10.** Keep the work tidy. For finding common denominators, list multiples of 6 and 4; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.

**11.** Look at what the numbers mean. For finding common denominators, list multiples of 2 and 8; the least common multiple is 8. Always simplify at the end so the answer is clean and useful.

**12.** Use the setup first. For finding common denominators, list multiples of 15 and 5; the least common multiple is 15. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

**13.** Check the size of the answer. For finding common denominators, the LCD of 3 and 4 is 12, so rewrite  $\frac{2}{3} = \frac{8}{12}$  and  $\frac{3}{4} = \frac{9}{12}$ . Fractions are easier to combine when the pieces are the same size.

**14.** Match the operation to the words. For finding common denominators, the LCD of 6 and 10 is 30; then compare  $\frac{25}{30}$  and  $\frac{21}{30}$ . Always simplify at the end so the answer is clean and useful.



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