

# Subtracting Fractions with Unlike Denominators

Grade 5 Math • Section 4.3

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

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

Score: \_\_\_\_\_ / 17

## Quick Review and Helpful Hints

**Steps:** (1) Find the LCD. (2) Rewrite fractions with the LCD. (3) Subtract the numerators; keep the common denominator. (4) Simplify if possible.

**Lightbulb:**  $\frac{a}{c} - \frac{b}{c} = \frac{a-b}{c}$  (same denominator required before subtracting).

**Info:** Make sure the larger fraction comes first when subtracting.

**Example:** Subtract  $\frac{5}{6} - \frac{1}{4}$ .

**Lightbulb:** LCD of 6 and 4 is 12.  $\frac{5}{6} = \frac{10}{12}$  and  $\frac{1}{4} = \frac{3}{12}$ .  $\frac{10}{12} - \frac{3}{12} = \frac{7}{12}$ .

**Lightbulb:** Answer:  $\frac{7}{12}$

## Practice Problems

Subtract. Write your answer in simplest form.

1.  $\frac{3}{4} - \frac{1}{3} =$  \_\_\_\_\_

6.  $\frac{4}{5} - \frac{1}{2} =$  \_\_\_\_\_

11.  $\frac{9}{10} - \frac{1}{4} =$  \_\_\_\_\_

2.  $\frac{5}{6} - \frac{2}{3} =$  \_\_\_\_\_

7.  $\frac{11}{12} - \frac{3}{4} =$  \_\_\_\_\_

12.  $\frac{7}{12} - \frac{1}{3} =$  \_\_\_\_\_

3.  $\frac{7}{8} - \frac{1}{4} =$  \_\_\_\_\_

8.  $\frac{7}{10} - \frac{2}{5} =$  \_\_\_\_\_

13.  $\frac{4}{9} - \frac{1}{6} =$  \_\_\_\_\_

4.  $\frac{2}{3} - \frac{1}{5} =$  \_\_\_\_\_

9.  $\frac{3}{4} - \frac{5}{12} =$  \_\_\_\_\_

14.  $\frac{8}{15} - \frac{1}{5} =$  \_\_\_\_\_

5.  $\frac{5}{9} - \frac{1}{3} =$  \_\_\_\_\_

10.  $\frac{5}{8} - \frac{1}{6} =$  \_\_\_\_\_

15.  $\frac{11}{12} - \frac{5}{8} =$  \_\_\_\_\_

## Word Problems

16. A tank is  $\frac{7}{8}$  full of water. After  $\frac{1}{3}$  is drained, what fraction is left? \_\_\_\_\_

17. A ribbon is  $\frac{5}{6}$  yard long. Lisa cuts off  $\frac{3}{8}$  yard. How much ribbon remains? \_\_\_\_\_



## Answer Keys

1.  $\frac{5}{12}$
2.  $\frac{1}{6}$
3.  $\frac{5}{8}$
4.  $\frac{7}{15}$
5.  $\frac{2}{9}$
6.  $\frac{3}{10}$
7.  $\frac{1}{6}$
8.  $\frac{3}{10}$
9.  $\frac{1}{3}$

10.  $\frac{11}{24}$
11.  $\frac{13}{20}$
12.  $\frac{1}{4}$
13.  $\frac{5}{18}$
14.  $\frac{1}{3}$
15.  $\frac{7}{24}$
16.  $\frac{13}{24}$
17.  $\frac{11}{24}$

### Step-by-Step Explanations

1. Start with the main idea. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{5}{12}$ . Fractions are easier to combine when the pieces are the same size.
2. Keep the work tidy. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{1}{6}$ . Always simplify at the end so the answer is clean and useful.
3. Look at what the numbers mean. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{5}{8}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
4. Use the setup first. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{7}{15}$ . Fractions are easier to combine when the pieces are the same size.
5. Check the size of the answer. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{2}{9}$ . Always simplify at the end so the answer is clean and useful.
6. Match the operation to the words. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{3}{10}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
7. Write the important values first. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{1}{6}$ . Fractions are easier to combine when the pieces are the same size.
8. Follow the pattern carefully. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{3}{10}$ . Always simplify at the end so the answer is clean and useful.
9. Start with the main idea. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The re-

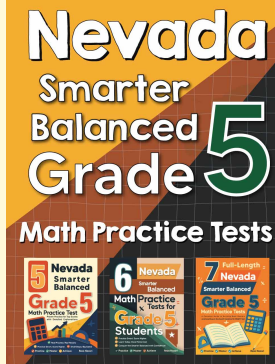
sult is  $\frac{1}{3}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.

10. Keep the work tidy. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{11}{24}$ . Fractions are easier to combine when the pieces are the same size.
11. Look at what the numbers mean. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{13}{20}$ . Always simplify at the end so the answer is clean and useful.
12. Use the setup first. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{1}{4}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
13. Check the size of the answer. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{5}{18}$ . Fractions are easier to combine when the pieces are the same size.
14. Match the operation to the words. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{1}{3}$ . Always simplify at the end so the answer is clean and useful.
15. Write the important values first. For subtracting fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is  $\frac{7}{24}$ . For mixed numbers, converting to improper fractions can make the arithmetic calmer.
16. Follow the pattern carefully. For subtracting fractions with unlike denominators, use twenty-fourths:  $\frac{7}{8} = \frac{21}{24}$  and  $\frac{1}{3} = \frac{8}{24}$ , so  $\frac{13}{24}$  remains. Fractions are easier to combine when the pieces are the same size.
17. Start with the main idea. For subtracting fractions with unlike denominators, use twenty-fourths:  $\frac{5}{6} = \frac{20}{24}$  and  $\frac{3}{8} = \frac{9}{24}$ , so  $\frac{11}{24}$  remains. Always simplify at the end so the answer is clean and useful.



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