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.

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

Make sure the larger fraction comes first when subtracting.

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

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

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

Practice Problems

Subtract. Write your answer in simplest form.

1. $\frac{3}{4} - \frac{1}{3} =$ _____
2. $\frac{5}{6} - \frac{2}{3} =$ _____
3. $\frac{7}{8} - \frac{1}{4} =$ _____
4. $\frac{2}{3} - \frac{1}{5} =$ _____
5. $\frac{5}{9} - \frac{1}{3} =$ _____
6. $\frac{4}{5} - \frac{1}{2} =$ _____
7. $\frac{11}{12} - \frac{3}{4} =$ _____
8. $\frac{7}{10} - \frac{2}{5} =$ _____
9. $\frac{3}{4} - \frac{5}{12} =$ _____
10. $\frac{5}{8} - \frac{1}{6} =$ _____
11. $\frac{9}{10} - \frac{1}{4} =$ _____
12. $\frac{7}{12} - \frac{1}{3} =$ _____
13. $\frac{4}{9} - \frac{1}{6} =$ _____
14. $\frac{8}{15} - \frac{1}{5} =$ _____
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?

_____

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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 result 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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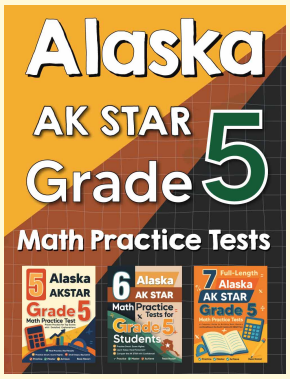

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