

Adding Fractions with Unlike Denominators

Grade 5 Math • Section 4.2

Name: _____

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Quick Review and Helpful Hints

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

Lightbulb: $\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$ (only add numerators when denominators match).

Warning: Do **not** add the denominators!

Example: Add $\frac{3}{4} + \frac{2}{5}$.

Lightbulb: LCD of 4 and 5 is 20. $\frac{3}{4} = \frac{15}{20}$ and $\frac{2}{5} = \frac{8}{20}$. $\frac{15}{20} + \frac{8}{20} = \frac{23}{20} = 1\frac{3}{20}$.

Lightbulb: Answer: $1\frac{3}{20}$

Practice Problems

Add. Write your answer in simplest form.

1. $\frac{1}{3} + \frac{1}{4} =$ _____

6. $\frac{3}{10} + \frac{2}{5} =$ _____

11. $\frac{5}{6} + \frac{2}{9} =$ _____

2. $\frac{2}{5} + \frac{1}{3} =$ _____

7. $\frac{7}{12} + \frac{1}{6} =$ _____

12. $\frac{3}{4} + \frac{5}{12} =$ _____

3. $\frac{3}{8} + \frac{1}{4} =$ _____

8. $\frac{1}{2} + \frac{3}{8} =$ _____

13. $\frac{1}{6} + \frac{4}{9} =$ _____

4. $\frac{5}{6} + \frac{1}{4} =$ _____

9. $\frac{4}{5} + \frac{1}{3} =$ _____

14. $\frac{5}{8} + \frac{3}{10} =$ _____

5. $\frac{2}{9} + \frac{1}{3} =$ _____

10. $\frac{2}{7} + \frac{3}{14} =$ _____

15. $\frac{7}{10} + \frac{3}{4} =$ _____

Word Problems

16. Emma drinks $\frac{1}{3}$ of a liter of water in the morning and $\frac{2}{5}$ of a liter in the afternoon. How much water did she drink in all?

17. A carpenter uses $\frac{5}{8}$ of a board for one shelf and $\frac{1}{4}$ of a board for another. How much of a board did he use altogether?



Answer Keys

1. $\frac{7}{12}$

2. $\frac{11}{15}$

3. $\frac{5}{8}$

4. $1\frac{1}{12}$

5. $\frac{5}{9}$

6. $\frac{7}{10}$

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

8. $\frac{7}{8}$

9. $1\frac{2}{15}$

10. $\frac{1}{2}$

11. $1\frac{1}{18}$

12. $1\frac{1}{6}$

13. $\frac{11}{18}$

14. $\frac{37}{40}$

15. $1\frac{9}{20}$

16. $\frac{11}{15}$

17. $\frac{7}{8}$

Step-by-Step Explanations

1. Start with the main idea. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{7}{12}$. Fractions are easier to combine when the pieces are the same size.

2. Keep the work tidy. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{11}{15}$. Always simplify at the end so the answer is clean and useful.

3. Look at what the numbers mean. For adding 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 adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $1\frac{1}{12}$. Fractions are easier to combine when the pieces are the same size.

5. Check the size of the answer. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{5}{9}$. Always simplify at the end so the answer is clean and useful.

6. Match the operation to the words. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{7}{10}$. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

7. Write the important values first. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{3}{4}$. Fractions are easier to combine when the pieces are the same size.

8. Follow the pattern carefully. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{7}{8}$. Always simplify at the end so the answer is clean and useful.

9. Start with the main idea. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $1\frac{2}{15}$.

For mixed numbers, converting to improper fractions can make the arithmetic calmer.

10. Keep the work tidy. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{1}{2}$. Fractions are easier to combine when the pieces are the same size.

11. Look at what the numbers mean. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $1\frac{1}{18}$. Always simplify at the end so the answer is clean and useful.

12. Use the setup first. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $1\frac{1}{6}$. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

13. Check the size of the answer. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{11}{18}$. Fractions are easier to combine when the pieces are the same size.

14. Match the operation to the words. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $\frac{37}{40}$. Always simplify at the end so the answer is clean and useful.

15. Write the important values first. For adding fractions with unlike denominators, use a common denominator, combine the numerators, and simplify. The result is $1\frac{9}{20}$. For mixed numbers, converting to improper fractions can make the arithmetic calmer.

16. Follow the pattern carefully. For adding fractions with unlike denominators, use fifteenths: $\frac{1}{3} = \frac{5}{15}$ and $\frac{2}{5} = \frac{6}{15}$, so the sum is $\frac{11}{15}$. Fractions are easier to combine when the pieces are the same size.

17. Start with the main idea. For adding fractions with unlike denominators, rewrite $\frac{1}{4}$ as $\frac{2}{8}$; $\frac{5}{8} + \frac{2}{8} = \frac{7}{8}$. Always simplify at the end so the answer is clean and useful.



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