

# Fraction Word Problems

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

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

Score: \_\_\_\_\_ / 24

## Q Quick Review

Many real-life situations use fractions. To solve a **fraction word problem**, first decide whether you need to **add** (combining amounts), **subtract** (finding what is left or the difference), or **multiply** (the same fraction used several times). When the fractions have the **same denominator**, add or subtract just the numerators and keep the denominator. Watch for the word “**of**” and for things being repeated — those often mean multiply by a whole number. Always write your answer in **simplest form** and include the units, like cups or miles.

◇ **Example:** Ella had  $\frac{7}{8}$  of a yard of string. She used  $\frac{3}{8}$  of a yard for a bracelet. How much string is left?

⇒ The question asks how much is *left*, so this is subtraction. Both amounts are eighths of a yard, so subtract the numerators:  $7 - 3 = 4$ , and keep the denominator 8. That gives  $\frac{4}{8}$  of a yard. Simplify by dividing top and bottom by 4:  $\frac{4}{8} = \frac{1}{2}$ . Ella has half a yard left.

**Answer:**  $\frac{1}{2}$  yard

## PRACTICE

Solve each fraction problem. Write each answer in simplest form.

- |                                             |       |                                             |       |
|---------------------------------------------|-------|---------------------------------------------|-------|
| 1. Add: $\frac{2}{6} + \frac{3}{6}$         | _____ | 11. Add: $\frac{4}{12} + \frac{2}{12}$      | _____ |
| 2. Subtract: $\frac{5}{8} - \frac{2}{8}$    | _____ | 12. Subtract: $\frac{9}{10} - \frac{4}{10}$ | _____ |
| 3. Add: $\frac{3}{10} + \frac{5}{10}$       | _____ | 13. Multiply: $5 \times \frac{2}{5}$        | _____ |
| 4. Subtract: $\frac{7}{12} - \frac{1}{12}$  | _____ | 14. Add: $\frac{30}{100} + \frac{45}{100}$  | _____ |
| 5. Multiply: $3 \times \frac{1}{4}$         | _____ | 15. Subtract: $\frac{7}{8} - \frac{1}{8}$   | _____ |
| 6. Add: $\frac{1}{4} + \frac{3}{4}$         | _____ | 16. Multiply: $2 \times \frac{5}{6}$        | _____ |
| 7. Subtract: $1 - \frac{2}{5}$              | _____ | 17. Add: $\frac{2}{4} + \frac{1}{4}$        | _____ |
| 8. Multiply: $4 \times \frac{2}{8}$         | _____ | 18. Subtract: $2 - \frac{3}{8}$             | _____ |
| 9. Add: $1\frac{1}{3} + 2\frac{1}{3}$       | _____ | 19. Multiply: $3 \times \frac{3}{8}$        | _____ |
| 10. Subtract: $3\frac{5}{6} - 1\frac{1}{6}$ | _____ | 20. Add: $2\frac{3}{8} + 1\frac{7}{8}$      | _____ |

## ◆ Word Problems

21. For a party, Theo blew up  $\frac{4}{10}$  of the balloons and his sister blew up  $\frac{3}{10}$  of them. What fraction of the balloons are blown up so far? \_\_\_\_\_
22. A bag of dog treats was  $\frac{5}{6}$  full. After a week, only  $\frac{2}{6}$  of the bag is left. What fraction of the bag of treats was used? \_\_\_\_\_
23. Each batch of muffins needs  $\frac{2}{3}$  cup of oil. If the bakery makes 4 batches, how many cups of oil are needed? \_\_\_\_\_
24. Sofia jogged  $2\frac{1}{4}$  miles on Monday and  $1\frac{3}{4}$  miles on Tuesday. How many miles did she jog in those two days? \_\_\_\_\_



## Answer Keys

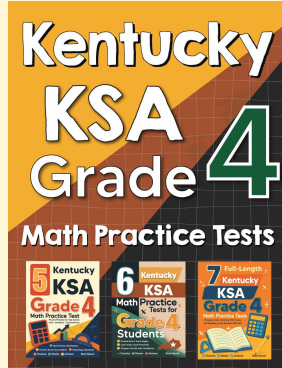
- |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. <math>\frac{5}{6}</math></p> <p>2. <math>\frac{3}{8}</math></p> <p>3. <math>\frac{4}{5}</math></p> <p>4. <math>\frac{1}{2}</math></p> <p>5. <math>\frac{3}{4}</math></p> <p>6. <math>1</math></p> <p>7. <math>\frac{3}{5}</math></p> <p>8. <math>1</math></p> <p>9. <math>3\frac{2}{3}</math></p> <p>10. <math>2\frac{2}{3}</math></p> <p>11. <math>\frac{1}{2}</math></p> <p>12. <math>\frac{1}{2}</math></p> | <p>13. <math>2</math></p> <p>14. <math>\frac{3}{4}</math></p> <p>15. <math>\frac{3}{4}</math></p> <p>16. <math>1\frac{2}{3}</math></p> <p>17. <math>\frac{3}{4}</math></p> <p>18. <math>1\frac{5}{8}</math></p> <p>19. <math>1\frac{1}{8}</math></p> <p>20. <math>4\frac{1}{4}</math></p> <p>21. <math>\frac{7}{10}</math> of the balloons</p> <p>22. <math>\frac{1}{2}</math> of the bag</p> <p>23. <math>2\frac{2}{3}</math> cups</p> <p>24. 4 miles</p> |
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### Step-by-Step Explanations

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| <p>1. Same denominator, so add the tops: <math>2 + 3 = 5</math>, giving <math>\frac{5}{6}</math>.</p> <p>2. Same denominator, so subtract the tops: <math>5 - 2 = 3</math>, giving <math>\frac{3}{8}</math>.</p> <p>3. Add the tops: <math>3 + 5 = 8</math>, giving <math>\frac{8}{10}</math>, which simplifies to <math>\frac{4}{5}</math>.</p> <p>4. Subtract the tops: <math>7 - 1 = 6</math>, giving <math>\frac{6}{12}</math>, which simplifies to <math>\frac{1}{2}</math>.</p> <p>5. Multiply the whole number by the top: <math>3 \times 1 = 3</math>, giving <math>\frac{3}{4}</math>.</p> <p>6. Add the tops: <math>1 + 3 = 4</math>, giving <math>\frac{4}{4}</math>, which equals one whole.</p> <p>7. Write 1 as <math>\frac{5}{5}</math>. Then <math>\frac{5}{5} - \frac{2}{5} = \frac{3}{5}</math>.</p> <p>8. Multiply: <math>4 \times 2 = 8</math>, giving <math>\frac{8}{8}</math>, which equals one whole.</p> <p>9. Wholes: <math>1 + 2 = 3</math>. Fractions: <math>\frac{1}{3} + \frac{1}{3} = \frac{2}{3}</math>.</p> <p>10. Wholes: <math>3 - 1 = 2</math>. Fractions: <math>\frac{5}{6} - \frac{1}{6} = \frac{4}{6} = \frac{2}{3}</math>.</p> <p>11. Add the tops: <math>4 + 2 = 6</math>, giving <math>\frac{6}{12}</math>, which simplifies to <math>\frac{1}{2}</math>.</p> <p>12. Subtract the tops: <math>9 - 4 = 5</math>, giving <math>\frac{5}{10}</math>, which simplifies to <math>\frac{1}{2}</math>.</p> <p>13. Multiply: <math>5 \times 2 = 10</math>, giving <math>\frac{10}{5}</math>, which equals 2.</p> | <p>14. Add the tops: <math>30 + 45 = 75</math>, giving <math>\frac{75}{100}</math>, which simplifies to <math>\frac{3}{4}</math>.</p> <p>15. Subtract the tops: <math>7 - 1 = 6</math>, giving <math>\frac{6}{8}</math>, which simplifies to <math>\frac{3}{4}</math>.</p> <p>16. Multiply: <math>2 \times 5 = 10</math>, giving <math>\frac{10}{6} = \frac{5}{3}</math>, which is <math>1\frac{2}{3}</math>.</p> <p>17. Add the tops: <math>2 + 1 = 3</math>, giving <math>\frac{3}{4}</math>.</p> <p>18. Write 2 as <math>1\frac{8}{8}</math>. Then <math>\frac{8}{8} - \frac{3}{8} = \frac{5}{8}</math>, leaving <math>1\frac{5}{8}</math>.</p> <p>19. Multiply: <math>3 \times 3 = 9</math>, giving <math>\frac{9}{8}</math>, which is <math>1\frac{1}{8}</math>.</p> <p>20. Wholes: <math>2 + 1 = 3</math>. Fractions: <math>\frac{3}{8} + \frac{7}{8} = \frac{10}{8} = 1\frac{2}{8}</math>, regroup to <math>4\frac{2}{8} = 4\frac{1}{4}</math>.</p> <p>21. This is addition. The denominators match, so add the tops: <math>4 + 3 = 7</math>, giving <math>\frac{7}{10}</math>.</p> <p>22. This is subtraction: <math>\frac{5}{6} - \frac{2}{6} = \frac{3}{6}</math>. Simplify by dividing by 3 to get <math>\frac{1}{2}</math>.</p> <p>23. The same amount is used 4 times, so multiply: <math>4 \times \frac{2}{3} = \frac{8}{3}</math>, which is <math>2\frac{2}{3}</math> cups.</p> <p>24. Add the wholes: <math>2 + 1 = 3</math>. Add the fractions: <math>\frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1</math>. Regroup: <math>3 + 1 = 4</math> miles.</p> |
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