Fractions as Division

Fractions as Division: Find, Fix, and Work Backward

Name _____ **Date** _____ **Score** _____ / 8

QUICK REVIEW

The fraction $\frac{a}{b}$ means $a \div b$ for $b \neq 0$. Sharing 5 loaves among 4 tables gives $\frac{5}{4} = 1\frac{1}{4}$ loaves per table. The numerator is the amount shared; the denominator is the number of equal shares. Check $4 \times \frac{5}{4} = 5$.

Worked example

Share 7 pizzas equally among 4 friends. What fraction of a pizza does each friend get?

1. The quotient is the fraction $\frac{7}{4}$; the dividend is the numerator.
2. $7 = 4 \times 1 + 3$, so each share is $1\frac{3}{4}$.
3. Check: $4 \times \frac{7}{4} = 7$ wholes.
Answer: $1\frac{3}{4}$ pizzas per friend.

Practice Problems

Show your thinking.

1. A student writes $11 \div 4 = \frac{4}{11}$. Correct the reversed fraction.

2. Each of 5 groups gets $\frac{2}{5}$ m of ribbon. Find the total ribbon, then write the related division equation.

3. A total of 9 L is shared into equal portions of $\frac{9}{5}$ L. Find the number of portions and write the fraction-division connection.

4. Compare sharing 8 loaves among 3 people with sharing the same loaves among 4. Which share is larger, and by how much?

5. Before cutting leftover loaves, how many whole loaves can each of 7 people receive from 4 loaves? Then share the leftovers and write the final share as a fraction.

6. A total of 3 L is shared into equal portions of $\frac{3}{4}$ L. Find the number of portions and write the fraction-division connection.

7. Each of 4 recipients gets $\frac{7}{3}$ L. Find their total volume and write a division equation that recovers one share.

8. There are 5 cakes for 6 people. Is each equal share more than, less than, or exactly one cake? Find the share.

Answer Key

1. $\frac{11}{4} = 2\,\frac{3}{4}$ per recipient.
2. 2 m total; $2 \div 5 = \frac{2}{5}$ m per share.
3. 5 portions; $9 \div 5 = \frac{9}{5}$.
4. Sharing among 3 gives $\frac{2}{3}$ loaf more per person.
5. 0 whole loaves first, 4 loaves left to share; final share $\frac{4}{7}$.
6. 4 portions; $3 \div 4 = \frac{3}{4}$.
7. $\frac{28}{3}$ L; $\frac{28}{3} \div 4 = \frac{7}{3}$.
8. $\frac{5}{6}$ cake per person. Less than one.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. The quotient is the fraction $\frac{11}{4}$; the dividend is the numerator.
2. $11 = 4 \times 2 + 3$, so each share is $2\,\frac{3}{4}$.
3. Check: $4 \times \frac{11}{4} = 11$ wholes.

Problem 2

1. Each share is $\frac{2}{5}$ m. Combine 5 equal shares: $5 \times \frac{2}{5} = 2$ m.
2. The related division is $2 \div 5 = \frac{2}{5} = \frac{2}{5}$ m per share.
3. This recovers the given share, confirming the total of 2 m.

Problem 3

1. Convert 9 L to pieces of $\frac{1}{5}$ L: $9 \times 5 = 45$ pieces.
2. Each portion contains 9 pieces, so $45 \div 9 = 5$ portions.
3. Check: $5 \times \frac{9}{5} = 9$ L.

Problem 4

1. The quotient is the fraction $\frac{8}{3}$; the dividend is the numerator.
2. $8 = 3 \times 2 + 2$, so each share is $2\,\frac{2}{3}$.
3. Check: $3 \times \frac{8}{3} = 8$ wholes.
4. The other share is $\frac{8}{4} = 2$; difference $\frac{8}{3} - 2 = \frac{2}{3}$.

Problem 5

1. The quotient is the fraction $\frac{4}{7}$; the dividend is the numerator.
2. $4 = 7 \times 0 + 4$, so each share is $\frac{4}{7}$.
3. Check: $7 \times \frac{4}{7} = 4$ wholes.

Problem 6

1. Convert 3 L to pieces of $\frac{1}{4}$ L: $3 \times 4 = 12$ pieces.
2. Each portion contains 3 pieces, so $12 \div 3 = 4$ portions.
3. Check: $4 \times \frac{3}{4} = 3$ L.

Problem 7

1. Combine 4 equal shares of $\frac{7}{3}$ L: $4 \times \frac{7}{3} = \frac{28}{3}$ L.
2. The related division is $\frac{28}{3} \div 4 = \frac{7}{3}$ L per recipient.
3. The total may be fractional; it is still exactly $\frac{28}{3}$ L.

Problem 8

1. The quotient is the fraction $\frac{5}{6}$; the dividend is the numerator.
2. $5 = 6 \times 0 + 5$, so each share is $\frac{5}{6}$.
3. Check: $6 \times \frac{5}{6} = 5$ wholes.

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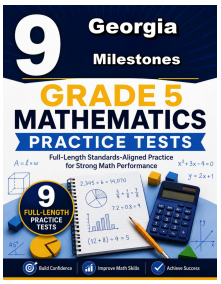

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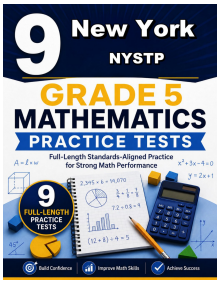

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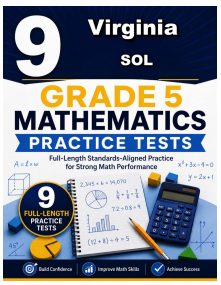

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