Fractions as Division

Fractions as Division: Models and Computation

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

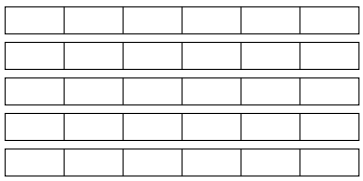
Show your thinking.

1. Share 3 pizzas equally among 4 friends. What fraction of a pizza does each friend get?

2. Write $7 \div 3$ as a fraction. If it is at least 1, also give its whole or mixed number form. Otherwise say why it is a proper fraction.

3. Show 5 loaves shared equally among 6 tables. Mark what one table receives from each loaf, then label its total share.

Each row is one loaf



4. There are 11 cakes for 4 people. Is each equal share more than, less than, or exactly one cake? Find the share.

5. A student writes $2 \div 5 = \frac{5}{2}$. Correct the reversed fraction.

6. Each of 5 groups gets $\frac{9}{5}$ m of ribbon. Find the total ribbon, then write the related division equation.

7. Share 8 pizzas equally among 3 friends. What fraction of a pizza does each friend get?

8. Write $4 \div 7$ as a fraction. If it is at least 1, also give its whole or mixed number form. Otherwise say why it is a proper fraction.

Answer Key

1. $\frac{3}{4}$ pizza per friend.
2. $\frac{7}{3} = 2\,\frac{1}{3}$.
3. $\frac{5}{6}$ loaf per table.
4. $2\,\frac{3}{4}$ cakes per person. More than one.
5. $\frac{2}{5} = \frac{2}{5}$ per recipient.
6. 9 m total; $9 \div 5 = \frac{9}{5}$ m per share.
7. $2\,\frac{2}{3}$ pizzas per friend.
8. $\frac{4}{7}$, a proper fraction since $4 < 7$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

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

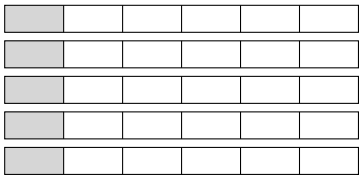
Problem 2

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

Problem 3

1. Each row is cut into 6 equal parts, so one part is $1/6$ of a loaf.
2. Give one part from each of the 5 loaves to one table. The shaded cells show that table's share.

Each row is one loaf



3. $5 \times (1/6) = \frac{5}{6} = \frac{5}{6}$ loaf per table.

Problem 4

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 5

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

Problem 6

1. Each share is $\frac{9}{5}$ m. Combine 5 equal shares: $5 \times \frac{9}{5} = 9$ m.
2. The related division is $9 \div 5 = \frac{9}{5} = \frac{9}{5}$ m per share.
3. This recovers the given share, confirming the total of 9 m.

Problem 7

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.

Problem 8

1. The quotient is the fraction $\frac{4}{7}$; the dividend is the numerator.
2. The numerator 4 is smaller than the denominator 7, so each share is less than one whole.
3. Check: $7 \times \frac{4}{7} = 4$ wholes.

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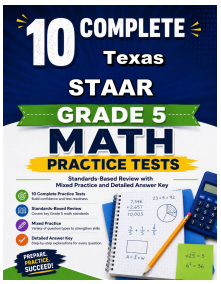

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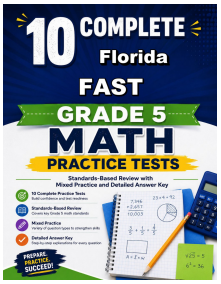

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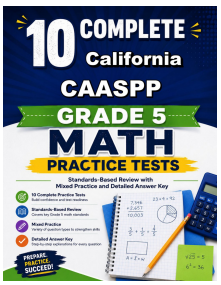

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