MATHEMATICS · GRADES 4-6

Understanding fractions as division

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you see that a fraction bar means divide, like splitting three pizzas between four friends, which is how fractions turn into decimals and sharing problems get solved. Three pizzas shared between four friends is three divided by four, and the fraction is just that division written down. That link is what turns a fraction into a decimal, because dividing the top by the bottom gives the decimal value. It is also what makes sharing problems easy, because the fraction is the sharing itself.



Rule

Fractions as division: a fraction bar means divide.

The fraction $\frac{a}{b}$ is a ÷ b, so dividing the top by the bottom gives the fraction's value as a decimal.

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Worked examples

EXAMPLE 1

Q Write $\frac{3}{4}$ as a division, then as a decimal.

SOLUTION

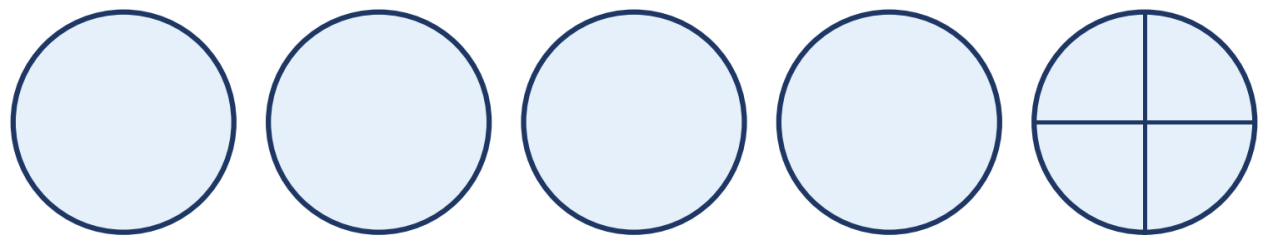
This is a fractions as division question, so the one rule to remember is: a fraction bar means divide, top divided by bottom. The fraction is not just a picture of pieces, it is a division waiting to happen.

$\frac{3}{4}$ means $3 \div 4$

Divide: $3 \div 4 = 0.75$, so $\frac{3}{4} = 0.75$

EXAMPLE 2

Q Share 5 pizzas equally among 4 friends. How much does each friend get?



SOLUTION

This is the same question type in a sharing story: sharing is division, so the number of pizzas divided by the number of friends is the fraction each friend gets.

The sharing is $5 \div 4$, which is the fraction $\frac{5}{4}$

$5 \div 4 = 1$ remainder 1, so each friend gets 1 whole pizza and $\frac{1}{4}$ of another: $1\frac{1}{4}$ pizzas

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Practice questions

1 Write 7 ÷ 8 as a fraction.

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2 Three pizzas are shared equally among 8 children. How much pizza does each child get?

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3 Write $\frac{1}{2}$ as a division.

- **A** 1 ÷ 2
- **B** 2 ÷ 1
- **C** 1 × 2
- **D** 2 - 1

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4 Write $\frac{5}{6}$ as a division.

- **A** 5 ÷ 6
- **B** 6 ÷ 5
- **C** 5 × 6
- **D** 6 - 5

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5 Two litres of juice are shared equally into 5 glasses. How much juice is in each glass?

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6 Write $\frac{3}{5}$ as a division.

A. 3 ÷ 5

B. 5 ÷ 3

C. 3 × 5

D. 5 - 3

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7 What is 9 ÷ 10 as a fraction?

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8 Which division equals $\frac{3}{7}$?

- **A** $7 \div 3$
- **B** $3 \div 7$
- **C** 3×7

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9 Write $\frac{2}{4}$ as a division.

- **A** $2 \div 4$
- **B** $4 \div 2$
- **C** 2×4
- **D** $4 - 2$

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10 **Six sandwiches are shared equally among 4 people. How much does each person get?**

A $1\frac{1}{2}$ sandwiches

B $1\frac{1}{4}$ sandwiches

C 2 sandwiches

D 1 sandwich

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ANSWER KEY

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

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

3. $1 \div 2$

4. $5 \div 6$

5. $\frac{2}{5}$

6. $3 \div 5$

7. $\frac{9}{10}$

8. $3 \div 7$

9. $2 \div 4$

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

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