MATHEMATICS · GRADES 4-6

Multiplying fractions

Difficulty level: Intermediate

Mathematics: Grades 4-6

This document was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

Overview of the concept

This is how you find a fraction of a fraction, like taking half of a third of a cake that is left for tomorrow. Multiplying fractions is how you take a part of a part, which happens whenever you share out something that is already a share. You use it to work out half of a recipe, a fraction of a tank of fuel, or your share of something that was already split once.



Rule

Multiply the tops, multiply the bottoms, then simplify.

The numerator of the answer is the product of the numerators, and the denominator is the product of the denominators.

© 2026 Brett Robbins. All Rights Reserved.

Worked examples

EXAMPLE 1

Q $\frac{1}{2} \times \frac{2}{3} = ?$

SOLUTION

$\frac{1}{2} \times \frac{2}{3}$

Tops: $1 \times 2 = 2$

Bottoms: $2 \times 3 = 6$ -> $\frac{2}{6} = \frac{1}{3}$

Multiply the numerators: $1 \times 2 = 2$

Multiply the denominators: $2 \times 3 = 6$

$\frac{2}{6} = \frac{2 \div 2}{6 \div 2} = \frac{1}{3}$

EXAMPLE 2

Q $\frac{3}{4} \times \frac{1}{2} = ?$

SOLUTION

$\frac{3}{4} \times \frac{1}{2}$

Tops: $3 \times 1 = 3$

Bottoms: $4 \times 2 = 8$ -> $\frac{3}{8}$

Multiply the numerators: $3 \times 1 = 3$

Multiply the denominators: $4 \times 2 = 8$

$\frac{3}{8}$ cannot simplify, so the answer is $\frac{3}{8}$.

© 2026 Brett Robbins. All Rights Reserved.

Practice questions

1 Maya has $\frac{2}{3}$ of a pizza left and eats $\frac{1}{2}$ of what is left. How much of the whole pizza did she eat?

- **A** $\frac{1}{2}$
- **B** $\frac{1}{3}$
- **C** $\frac{2}{3}$
- **D** $\frac{1}{6}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

2 A recipe uses $\frac{3}{4}$ cup of flour. Liam makes $\frac{1}{2}$ of the recipe. How much flour does he use?

- **A** $\frac{3}{4}$
- **B** $\frac{1}{2}$
- **C** $\frac{1}{4}$
- **D** $\frac{3}{8}$

Understand It with Pulse | Flag a mistake

3 A rope is 6 m long. Mia uses $\frac{2}{3}$ of it. How long is the piece she uses?

- **A** 4 m
- **B** 3 m
- **C** 2 m
- **D** 9 m

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

4 Sara has $\frac{3}{4}$ of a cake and gives $\frac{1}{3}$ of it to a friend. Which multiplication tells how much of the whole cake she gave away?

A $\frac{3}{4} \times \frac{1}{3}$

B $\frac{3}{4} + \frac{1}{3}$

C $\frac{3}{4} - \frac{1}{3}$

D $\frac{1}{3} \div \frac{3}{4}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

5 Which is greater: $\frac{2}{3}$ of $\frac{1}{2}$, or $\frac{1}{2}$ of $\frac{1}{2}$?

- **A** $\frac{2}{3}$ of $\frac{1}{2}$
- **B** $\frac{1}{2}$ of $\frac{1}{2}$
- **C** They are equal
- **D** Cannot tell

Understand It with Pulse | Flag a mistake

6 Simplify first, then multiply: $\frac{2}{4} \times \frac{3}{6}$. What is the product?

- **A** $\frac{1}{4}$
- **B** $\frac{1}{3}$
- **C** $\frac{1}{6}$
- **D** $\frac{1}{2}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

7 A ribbon is $\frac{2}{3}$ m long. Mia uses $\frac{1}{4}$ of it for a bow. How long is the piece she uses?

A $\frac{1}{6}$

B $\frac{2}{3}$

C $\frac{1}{4}$

D $\frac{1}{12}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

8 A tank is $\frac{5}{6}$ full of water. Then $\frac{1}{2}$ of the water is used. What fraction of a full tank is LEFT?

A $\frac{5}{12}$

B $\frac{7}{12}$

C $\frac{1}{2}$

D $\frac{1}{6}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

9 Ben eats $\frac{1}{2}$ of $\frac{2}{3}$ of $\frac{3}{4}$ of a pizza. How much of the whole pizza did he eat?

A $\frac{1}{4}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{1}{6}$

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

10 Is $\frac{1}{4} \times \frac{1}{2}$ more than, less than, or equal to $\frac{1}{4}$?

A More than $\frac{1}{4}$

B Less than $\frac{1}{4}$

C Equal to $\frac{1}{4}$

D Cannot tell

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. $\frac{1}{3}$

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

3. 4 m

4. $\frac{3}{4} \times \frac{1}{3}$

5. $\frac{2}{3}$ of $\frac{1}{2}$

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

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

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

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

10. Less than $\frac{1}{4}$

© 2026 Brett Robbins. All Rights Reserved.