

Fraction Multiply Mission

Multiply fractions and whole numbers with meaning.

GRADE 5 • 5.NF.B.4

CCSS.Math.Content.5.NF.B.4 "Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction."

NAME _____

DATE _____

THE BIG IDEA

To multiply fractions, multiply the numerators and multiply the denominators. To multiply a whole number by a fraction, write the whole number as a fraction with 1 as the denominator, then simplify the product.

WORKED EXAMPLE

$$7/8 \times 3/10$$

1. Multiply the numerators: $7 \times 3 = 21$.
2. Multiply the denominators: $8 \times 10 = 80$.
3. Write the product: $21/80$.
4. $21/80$ is already in simplest form.

Answer: 21/80

PRACTICE 6 problems

1 $1/2 \times 5/6$

ANSWER _____

2 $4 \times 1/5$

ANSWER _____

3 $2/9 \times 9/11$

ANSWER _____

4 $5/12 \times 6/11$

ANSWER _____

5 $6 \times 2/11$

ANSWER _____

6 $1/9 \times 4/5$

ANSWER _____

APPLY IT Show your work

- 1** At a coding club, $\frac{4}{5}$ of the students sign up for a game-design session. Of those students, $\frac{1}{6}$ choose the music team. What fraction of all the club students choose the music team?

WORK SPACE

ANSWER _____

- 2** A streamer plans to spend $\frac{2}{5}$ of an hour editing a video each day for 6 days. How many hours will the streamer spend editing?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Without finding the exact product, decide whether $1\frac{1}{12} \times \frac{5}{6}$ is greater or less than $\frac{5}{6}$. Explain why.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$1/2 \times 5/6$	5/12
2	$4 \times 1/5$	4/5
3	$2/9 \times 9/11$	2/11
4	$5/12 \times 6/11$	5/22
5	$6 \times 2/11$	1 1/11
6	$1/9 \times 4/5$	4/45

PART 2 • APPLY IT

1. **2/15** Multiply $4/5$ by $1/6$. Simplify the product to $2/15$.
2. **2 2/5 hours** Multiply $2/5$ by 6 to get $12/5$ hours. Rename $12/5$ as 2 $2/5$ hours.

CHALLENGE

Less than $5/6$, because $11/12$ is greater than 0 but less than 1, so multiplying by it makes $5/6$ smaller.

Accept equivalent fraction forms when they represent the same value. For the challenge, accept reasoning that recognizes multiplication by a positive fraction less than 1 makes a positive quantity smaller.