

Fraction Division Quest

Divide unit fractions and whole numbers with confidence.

GRADE 5 • NY-5.NF.7

NY-5.NF.7 "Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions."

NAME _____

DATE _____

DIVIDE WITH UNIT FRACTIONS

When you divide a unit fraction by a whole number, multiply the denominator by the whole number. When you divide a whole number by a unit fraction, multiply the whole number by the denominator.

WORKED EXAMPLE

Find $1/11 \div 7$.

1. Start with $1/11 \div 7$.
2. Multiply the denominator by 7.
3. $11 \times 7 = 77$.
4. So $1/11 \div 7 = 1/77$.

Answer: 1/77

PRACTICE 6 problems

1 Find $1/5 \div 3$.

ANSWER _____

2 Find $1/8 \div 6$.

ANSWER _____

3 Find $4 \div 1/3$.

ANSWER _____

4 Find $9 \div 1/4$.

ANSWER _____

5 Find $1/10 \div 5$.

ANSWER _____

6 Find $6 \div 1/8$.

ANSWER _____

APPLY IT Show your work

- 1** A $\frac{1}{6}$ -liter bottle of neon paint is shared equally among 3 students for a poster project. How many liters of paint does each student get?

WORK SPACE

ANSWER _____

- 2** A maker club has 8 yards of ribbon. Each robot badge needs $\frac{1}{4}$ yard of ribbon. How many badges can the club make?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Which is greater, $\frac{1}{4} \div 5$ or $5 \div \frac{1}{4}$? Explain how you know, and give each value.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $1/5 \div 3$.	1/15
2	Find $1/8 \div 6$.	1/48
3	Find $4 \div 1/3$.	12
4	Find $9 \div 1/4$.	36
5	Find $1/10 \div 5$.	1/50
6	Find $6 \div 1/8$.	48

PART 2 • APPLY IT

1. **1/18 liter** Divide the unit fraction by 3. $1/6 \div 3 = 1/18$.
2. **32 badges** Find how many fourths are in 8 yards. $8 \div 1/4 = 8 \times 4 = 32$.

CHALLENGE

$1/4 \div 5 = 1/20$. $5 \div 1/4 = 20$, so $5 \div 1/4$ is greater because it asks how many fourths fit into 5 wholes.

Accept equivalent fraction forms if they have the same value, although all unit-fraction answers are already simplified. For the challenge, accept a correct comparison with both values and a reasonable explanation.