

Fraction Sharing Quest

Divide unit fractions and whole numbers in real situations.

GRADE 5 • 5.NF.B.7c

CCSS.Math.Content.5.NF.B.7c "Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example..."

NAME _____

DATE _____

THE BIG IDEA

A unit fraction has 1 as its numerator. To share $1/b$ equally among n people, use $1/b \div n = 1/(b \times n)$. To find how many $1/b$ -sized groups fit in a whole number, multiply the whole number by b .

WORKED EXAMPLE

Find $1/9 \div 7$.

1. Write an equation: $1/9 \div 7 = x$.
2. Sharing $1/9$ into 7 equal groups makes 63 equal pieces in one whole.
3. So $x = 1/63$.

Answer: $1/63$

PRACTICE 6 problems

1 Find $1/4 \div 2$.

ANSWER _____

2 Find $1/6 \div 5$.

ANSWER _____

3 Find $3 \div 1/4$.

ANSWER _____

4 Find $8 \div 1/2$.

ANSWER _____

5 A $1/3$ -meter ribbon is shared equally among 4 students. How much ribbon does each student get?

ANSWER _____

6 How many $1/8$ -cup scoops will fill 6 cups?

ANSWER _____

APPLY IT Show your work

- 1** A gaming club has 7 feet of cord. Each controller needs $\frac{1}{2}$ foot of cord. How many controllers can get cord?

WORK SPACE

ANSWER _____

- 2** At art club, $\frac{1}{5}$ liter of paint is shared equally among 6 students. How much paint does each student get?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

An 8-cup drink dispenser is filled for a game tournament. Each player gets $\frac{1}{4}$ cup. After 6 players get drinks, how many more players can get $\frac{1}{4}$ cup? Show an equation for the total number of servings and an equation for the servings left.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $1/4 \div 2$.	1/8
2	Find $1/6 \div 5$.	1/30
3	Find $3 \div 1/4$.	12
4	Find $8 \div 1/2$.	16
5	A $1/3$ -meter ribbon is shared equally among 4 students. How much ribbon does each student get?	1/12 meter
6	How many $1/8$ -cup scoops will fill 6 cups?	48 scoops

PART 2 • APPLY IT

1. **14 controllers** Find how many $1/2$ -foot groups are in 7 feet: $7 \div 1/2 = 14$.
2. **1/30 liter** Divide the unit fraction by 6: $1/5 \div 6 = 1/30$.

CHALLENGE

26 more players; $8 \div 1/4 = 32$ and $32 - 6 = 26$

Accept equivalent fraction forms when they are correct, although all fraction answers here are in simplest form. For the challenge, accept clear equations showing 32 total servings and 26 servings left.