

Fraction Division Quest

Find how many unit-fraction groups fit and how shares get smaller.

GRADE 5 • TEKS 5.3.L

5.3.L "divide whole numbers by unit fractions and unit fractions by whole numbers."

NAME _____

DATE _____

DIVIDE WITH UNIT FRACTIONS

To divide a whole number by a unit fraction, multiply the whole number by the fraction's denominator. To divide a unit fraction by a whole number, multiply the denominator by the whole number, so the answer is a smaller unit fraction.

WORKED EXAMPLE

$$11 \div \frac{1}{9}$$

1. A whole has 9 groups of $\frac{1}{9}$.
2. 11 wholes have 11×9 groups of $\frac{1}{9}$.
3. $11 \times 9 = 99$.
4. $11 \div \frac{1}{9} = 99$.

Answer: 99

PRACTICE 6 problems

1 $8 \div \frac{1}{2} =$

ANSWER _____

2 $7 \div \frac{1}{4} =$

ANSWER _____

3 $15 \div \frac{1}{5} =$

ANSWER _____

4 $\frac{1}{2} \div 3 =$

ANSWER _____

5 $\frac{1}{5} \div 4 =$

ANSWER _____

6 $\frac{1}{7} \div 2 =$

ANSWER _____

APPLY IT Show your work

- 1** A friendship-bracelet club has 18 feet of cord. Each bracelet needs $\frac{1}{6}$ foot of cord. How many bracelets can the club make?

WORK SPACE

ANSWER _____

- 2** A student has $\frac{1}{4}$ minute of music for five short video clips. The music is shared equally. How many minutes of music does each clip get?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find x . $x \div \frac{1}{8} = 56$

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$8 \div 1/2 =$	16
2	$7 \div 1/4 =$	28
3	$15 \div 1/5 =$	75
4	$1/2 \div 3 =$	1/6
5	$1/5 \div 4 =$	1/20
6	$1/7 \div 2 =$	1/14

PART 2 • APPLY IT

1. **108 bracelets** Divide 18 by $1/6$. Since each foot contains 6 groups of $1/6$, compute $18 \times 6 = 108$.
2. **1/20 minute** Divide $1/4$ by 5. Multiply the denominator 4 by 5 to get $1/20$.

CHALLENGE

x=7

Accept equivalent fraction answers when they are correct, although the listed fraction answers are in simplest form. For the challenge, accept work showing that 56 groups of $1/8$ make 7 wholes.