LESSON MAKER PRO

# Fraction Division Quest

*Divide unit fractions and whole numbers with confidence.*

**GRADE 5 · 5.NF.B.7**

**CCSS.Math.Content.5.NF.B.7** "Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. 1"

NAME _____ DATE _____

## THE BIG IDEA

To divide a unit fraction by a whole number, multiply the denominator by that whole number. To divide a whole number by a unit fraction, find how many of those fractional pieces fit in the whole.

## WORKED EXAMPLE

$1/11 \div 4$

1. Start with 1/11.
2. Divide the fraction into 4 equal parts.
3. Multiply the denominator: 11 x 4 = 44.
4. So 1/11 ÷ 4 = 1/44.

**Answer: 1/44**

## PRACTICE 6 problems

**1** 6 ÷ 1/5 = ____

**ANSWER** _____

**2** 1/8 ÷ 2 = ____

**ANSWER** _____

**3** 9 ÷ 1/2 = ____

**ANSWER** _____

**4** 1/10 ÷ 5 = ____

**ANSWER** _____

**5** 1/6 ÷ 9 = ____

**ANSWER** _____

**6** 12 ÷ 1/3 = ____

**ANSWER** _____

## APPLY IT Show your work

**1** A robotics team has 8 meters of wire. They cut the wire into pieces that are each 1/2 meter long. How many pieces of wire can they cut?

WORK SPACE

**ANSWER** _____

**2** Maya has 1/5 pound of clay. She divides it equally among 6 mini sculptures. How much clay does each sculpture get?

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

Find 10 ÷ 1/8 and 1/8 ÷ 10. Then explain why one answer is much greater than 1 and the other answer is much less than 1.

WORK SPACE AND ANSWER

**ANSWER KEY**

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## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | 6 ÷ 1/5 = ____ | **30** |
| 2 | 1/8 ÷ 2 = ____ | **1/16** |
| 3 | 9 ÷ 1/2 = ____ | **18** |
| 4 | 1/10 ÷ 5 = ____ | **1/50** |
| 5 | 1/6 ÷ 9 = ____ | **1/54** |
| 6 | 12 ÷ 1/3 = ____ | **36** |

## PART 2 · APPLY IT

1. **16 pieces** Find how many 1/2-meter pieces fit in 8 meters: 8 ÷ 1/2 = 16.
2. **1/30 pound** Divide the unit fraction by 6: 1/5 ÷ 6 = 1/30.

## CHALLENGE

**10 ÷ 1/8 = 80. 1/8 ÷ 10 = 1/80. Dividing 10 wholes into 1/8-size pieces gives many pieces, while dividing 1/8 into 10 equal parts gives a very small piece.**

Accept equivalent fraction forms when applicable. For the challenge, accept explanations that connect dividing by a small unit fraction to counting many pieces and dividing a unit fraction by a whole number to making smaller equal parts.