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

CHALLENGE

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.

_____

_____

ANSWER KEY

Fraction Division Quest

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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.