LESSON MAKER PRO

Tiny Equal Shares

Divide unit fractions with models and equations

GRADE 5 · 5.NOS.D.16.b

5.NOS.D.16.b "Use visual fraction models and equations to interpret division of a unit fraction by a non-zero whole number and compute quotients."

NAME _____ DATE _____

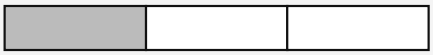
THE BIG IDEA

Dividing a unit fraction makes smaller equal shares. To find one share, multiply the fraction's denominator by the number of shares.

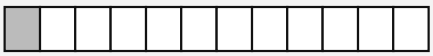
WORKED EXAMPLE

Find 1/3 ÷ 4.

Start: 1/3



One share



1. Split each third into 4 equal pieces.
2. Now 1/3 = 4/12.
3. Share the 4 pieces equally: each share is 1/12.

Answer: 1/3 ÷ 4 = 1/12

PRACTICE 4 problems

1 1/2 ÷ 5 = ___

ANSWER _____

2 1/5 ÷ 6 = ___

ANSWER _____

3 1/8 ÷ 6 = ___

ANSWER _____

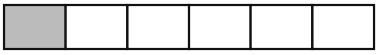
4 1/9 ÷ 5 = ___

ANSWER _____

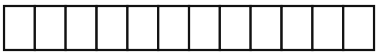
APPLY IT Show your work

1 You have 1/6 yard of ribbon for 2 friendship bracelets. Split it equally. Shade one bracelet's share on the model. How many yards does it get? Write an equation.

Ribbon



Shade one share



ANSWER _____

2 Six friends split 1/10 of a pizza equally. What fraction of the whole pizza does each friend get? Write an equation.

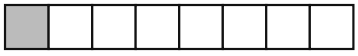
WORK SPACE

ANSWER _____

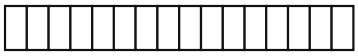
CHALLENGE One step up

A student says 1/8 ÷ 2 = 1/4. Use the model to find the correct quotient. Explain the mistake.

Start: 1/8



Equal small parts



WORK SPACE AND ANSWER

ANSWER KEY

Tiny Equal Shares

GRADE 5 · 5.NOS.D.16.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	1/2 ÷ 5 = ___	**1/10**
2	1/5 ÷ 6 = ___	**1/30**
3	1/8 ÷ 6 = ___	**1/48**
4	1/9 ÷ 5 = ___	**1/45**

PART 2 · APPLY IT

1. **Shade 1 of 12 parts. 1/6 ÷ 2 = 1/12 yard.** Splitting the shaded sixth in half makes two twelfths. One bracelet gets 1/12 yard.
2. **1/10 ÷ 6 = 1/60 of the pizza** Divide the tenth into 6 equal shares. Each share is 1/60 of the whole pizza.

CHALLENGE

1/8 ÷ 2 = 1/16. Shade 1 of the 16 small parts. Dividing 1/8 makes a smaller share, but 1/4 is larger than 1/8.

For the challenge, accept an explanation that each eighth splits into two sixteenths. For the ribbon model, the student should shade one of the 12 small parts.