LESSON MAKER PRO

Fraction Division Quest

Split tiny parts and count equal pieces.

GRADE 5 · 5.NR.3.6

5.NR.3.6 "Model and solve problems involving division of a unit fraction by a whole number and a whole number by a unit fraction."

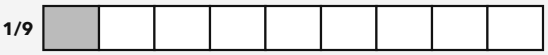
NAME _____ DATE _____

SPLIT OR COUNT

To divide a unit fraction by a whole number, split that fraction into the given number of equal shares. Multiply the denominator by the whole number. To divide a whole number by a unit fraction, count how many of those fractional pieces fit in the whole number, so multiply the whole number by the fraction's denominator.

WORKED EXAMPLE

The shaded bar shows 1/9. Divide 1/9 equally among 5 students.



1. Start with 1/9.
2. Split that ninth into 5 equal shares.
3. Multiply the denominator: 9 × 5 = 45.
4. Each share is 1/45.

Answer: 1/45

PRACTICE 6 problems

1 Find 1/2 ÷ 3.



ANSWER _____

2 Find 1/4 ÷ 6.

ANSWER _____

3 Find 7 ÷ 1/3.

ANSWER _____

4 Find 8 ÷ 1/2.

ANSWER _____

5 Find 1/7 ÷ 2.

ANSWER _____

6 Find 12 ÷ 1/4.

ANSWER _____

APPLY IT Show your work

1 During an art club project, 1/10 liter of glow paint is shared equally among 2 small signs. How much paint does each sign get?

WORK SPACE

ANSWER _____

2 A game trail is 8 kilometers long. A player earns one badge for each 1/4 kilometer completed. How many badges can the player earn by finishing the whole trail?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club has 1/2 pound of birdseed for 3 feeders. The birdseed is shared equally among the feeders. Each small bag holds 1/18 pound. How many small bags can one feeder's share fill? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Division Quest

GRADE 5 · 5.NR.3.6

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 1/2 ÷ 3.	**1/6**
2	Find 1/4 ÷ 6.	**1/24**
3	Find 7 ÷ 1/3.	**21**
4	Find 8 ÷ 1/2.	**16**
5	Find 1/7 ÷ 2.	**1/14**
6	Find 12 ÷ 1/4.	**48**

PART 2 · APPLY IT

1. **1/20 liter** Divide the unit fraction by the number of signs: 1/10 ÷ 2 = 1/20.
2. **32 badges** Count fourth-kilometer pieces in 8 kilometers: 8 ÷ 1/4 = 8 × 4 = 32.

CHALLENGE

3 small bags. One feeder gets 1/2 ÷ 3 = 1/6 pound, and 1/6 ÷ 1/18 = 3.

Accept equivalent fraction forms for fractional answers if they have the same value. For the challenge, accept a correct explanation that shows both division steps or equivalent multiplication reasoning.