LESSON MAKER PRO

Fraction Split Quest

Divide unit fractions and whole numbers.

GRADE 5 · MA.5.AR.1.3

MA.5.AR.1.3 "Solve real-world 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 1/n by a whole number, multiply the denominator by that whole number. To divide a whole number by 1/n, count how many 1/n-size pieces fit, so multiply the whole number by n.

WORKED EXAMPLE

Find $1/11 \div 12$.

1. Write: $1/11 \div 12 = 1/(11 \times 12)$.
2. Multiply the denominator: $11 \times 12 = 132$.
3. So, $1/11 \div 12 = 1/132$.

Answer: 1/132

PRACTICE 6 problems

1 $1/4 \div 3 =$ ___

ANSWER _____

2 $1/5 \div 7 =$ ___

ANSWER _____

3 $6 \div 1/3 =$ ___

ANSWER _____

4 $4 \div 1/8 =$ ___

ANSWER _____

5 $1/10 \div 2 =$ ___

ANSWER _____

6 $9 \div 1/6 =$ ___

ANSWER _____

APPLY IT Show your work

1 Jordan has 1/4 hour of reading time to share equally over 3 days. How much reading time is planned for each day?

WORK SPACE

ANSWER _____

2 The art club has 5 yards of ribbon. Each badge needs 1/5 yard of ribbon. How many badges can the club make?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A 4-mile trail is divided into 1/8-mile sections. Each section is divided into 3 equal check-in zones. How many check-in zones are there?

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Split Quest

GRADE 5 · MA.5.AR.1.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	1/4 ÷ 3 = ___	**1/12**
2	1/5 ÷ 7 = ___	**1/35**
3	6 ÷ 1/3 = ___	**18**
4	4 ÷ 1/8 = ___	**32**
5	1/10 ÷ 2 = ___	**1/20**
6	9 ÷ 1/6 = ___	**54**

PART 2 · APPLY IT

1. **1/12 hour** Divide 1/4 by 3. Multiply the denominator by 3: 1/(4 × 3) = 1/12 hour.
2. **25 badges** Find how many 1/5-yard pieces fit into 5 yards. Compute 5 × 5 = 25 badges.

CHALLENGE

96 check-in zones

Accept equivalent fraction forms that are equal to the simplified answers. For the challenge, students may find 32 sections first, then multiply by 3, or recognize that each zone is 1/24 mile and compute 4 ÷ 1/24.