LESSON MAKER PRO

Rational Number Remix

Multiply, divide, and check your results

GRADE 6 · 6.N.4

6.N.4 "Multiply and divide decimals, fractions, and mixed numbers; solve real-world and mathematical problems with rational numbers. Estimate solutions to problems with whole numbers, decimals, fractions, and mixed numbers..."

NAME _____ DATE _____

ONE SET OF RULES

Change mixed numbers and terminating decimals to fractions before you multiply or divide. To multiply fractions, multiply the numerators and multiply the denominators. To divide fractions, multiply by the reciprocal of the divisor, then estimate to check whether your answer makes sense.

WORKED EXAMPLE

Find 2 1/3 ÷ 4/9.

1. Change the mixed number: 2 1/3 = 7/3.
2. Multiply by the reciprocal: 7/3 ÷ 4/9 = 7/3 × 9/4.
3. Multiply and simplify: 63/12 = 21/4.
4. Write the result as a mixed number: 21/4 = 5 1/4.

Answer: 5 1/4

PRACTICE 6 problems

1 Find 3/4 × 2/5.

ANSWER _____

2 Find 1 1/2 × 2/9.

ANSWER _____

3 Find 7/10 ÷ 1/5.

ANSWER _____

4 Find 2 2/5 ÷ 3/4.

ANSWER _____

5 Find 0.6 × 1/4.

ANSWER _____

6 Find 1.2 ÷ 3/5.

ANSWER _____

APPLY IT Show your work

1 You have 4 1/2 meters of cord. Each friendship bracelet needs 3/4 meter. How many bracelets can you make?

WORK SPACE

ANSWER _____

2 Your music player has 2.4 GB of free space. Each song uses 0.08 GB. How many songs can you save?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club has 4 1/2 meters of cord. It cuts the cord into pieces that are each 3/8 meter long. The club uses 1/3 of the pieces. How many pieces are left? Give an estimate to check your answer.

WORK SPACE AND ANSWER

ANSWER KEY

Rational Number Remix

GRADE 6 · 6.N.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 3/4 × 2/5.	**3/10**
2	Find 1 1/2 × 2/9.	**1/3**
3	Find 7/10 ÷ 1/5.	**3 1/2**
4	Find 2 2/5 ÷ 3/4.	**3 1/5**
5	Find 0.6 × 1/4.	**0.15**
6	Find 1.2 ÷ 3/5.	**2**

PART 2 · APPLY IT

1. **6 bracelets** Divide the total cord by the cord per bracelet: 4 1/2 ÷ 3/4 = 9/2 × 4/3 = 6.
2. **30 songs** Divide the free space by the space per song: 2.4 ÷ 0.08 = 30.

CHALLENGE

8 pieces are left. The club cuts 4 1/2 ÷ 3/8 = 12 pieces, uses 4, and has 8 left. Estimating each piece as 1/2 meter gives 9 pieces total and about 6 left. Since 3/8 meter is shorter than 1/2 meter, 8 left is reasonable.

Accept equivalent simplified fractions or decimals for the practice answers. For the challenge, accept a different estimate if it supports the reasonableness of 8 pieces.