LESSON MAKER PRO

Multiply, Divide, Check

Use multiplication to make sense of fractions and decimals.

GRADE 6 · 6.N.4.2

6.N.4.2 "Illustrate multiplication and division of fractions and decimals to show connections to fractions, whole number multiplication, and inverse relationships."

NAME _____ DATE _____

THE BIG IDEA

To multiply fractions, multiply the numerators and multiply the denominators. To divide by a fraction, multiply by its reciprocal. Multiplication can also check a division answer: multiply the quotient by the divisor to get the starting amount.

WORKED EXAMPLE

Find $3/5 \div 2/7$.

1. Use the reciprocal of 2/7, which is 7/2.
2. Multiply: 3/5 × 7/2 = 21/10.
3. Write 21/10 as 2 1/10.
4. Check: 21/10 × 2/7 = 3/5.

Answer: 2 1/10

PRACTICE 6 problems

1 Find 2/3 × 3/4.

ANSWER _____

2 Find 1 1/2 × 2/3.

ANSWER _____

3 Find 4/5 ÷ 2/3. Then check your answer by multiplying.

ANSWER _____

4 Find 1 1/4 ÷ 5/8.

ANSWER _____

5 Find 0.6 × 0.4. Write the product as a decimal and as a fraction in simplest form.

ANSWER _____

6 Find 3.6 ÷ 0.12.

ANSWER _____

APPLY IT Show your work

1 A gaming club has 4.5 hours to play. Each game lasts 0.75 hour. How many games can the club play?

WORK SPACE

ANSWER _____

2 One bracelet uses 3/4 meter of string. How many meters of string do you need for 6 bracelets?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A water jug holds 1.75 liters. You pour 3/8 liter into each cup. How many full cups can you fill, and how many liters remain? Use multiplication to check.

WORK SPACE AND ANSWER

ANSWER KEY

Multiply, Divide, Check

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find 2/3 × 3/4.	**1/2**
2	Find 1 1/2 × 2/3.	**1**
3	Find 4/5 ÷ 2/3. Then check your answer by multiplying.	**1 1/5; check: 1 1/5 × 2/3 = 4/5**
4	Find 1 1/4 ÷ 5/8.	**2**
5	Find 0.6 × 0.4. Write the product as a decimal and as a fraction in simplest form.	**0.24; 6/25**
6	Find 3.6 ÷ 0.12.	**30**

PART 2 · APPLY IT

1. **6 games** Divide 4.5 by 0.75 to get 6. Check that 6 × 0.75 = 4.5.
2. **4 1/2 meters** Multiply 6 × 3/4 = 18/4 = 4 1/2 meters.

CHALLENGE

4 full cups, with 1/4 liter remaining. Check: 4 × 3/8 + 1/4 = 1 3/4 = 1.75 liters.

Accept equivalent simplified fractions and mixed numbers. For the challenge, the multiplication check must include the remaining 1/4 liter.