

Flip and Find

Divide fractions by multiplying by a reciprocal.

GRADE 6 • 6.NS.A.1

CCSS.Math.Content.6.NS.A.1 "Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example..."

NAME _____

DATE _____

THE BIG IDEA

A fraction division question asks how many groups of the divisor fit in the dividend. Change division into multiplication by the reciprocal of the divisor, then multiply and simplify.

WORKED EXAMPLE

Find $5/8 \div 7/10$.

1. Rewrite as multiplication by the reciprocal: $5/8 \times 10/7$.
2. Multiply: $(5 \times 10)/(8 \times 7) = 50/56$.
3. Simplify: $50/56 = 25/28$.

Answer: 25/28

PRACTICE 6 problems

1 Find $2/3 \div 4/9$.

ANSWER _____

2 Find $11/12 \div 1/6$.

ANSWER _____

3 Find $13/16 \div 2/3$.

ANSWER _____

4 Find $4/11 \div 6/13$.

ANSWER _____

5 Find $1 \frac{1}{2} \div 3/4$.

ANSWER _____

6 Find $9/16 \div 3/12$.

ANSWER _____

APPLY IT Show your work

- 1** Jay has $\frac{2}{3}$ yard of glow-in-the-dark tape for controller labels. Each label needs $\frac{1}{9}$ yard of tape. How many labels can Jay make?

WORK SPACE

ANSWER _____

- 2** A community garden bed has an area of $\frac{3}{4}$ square yard and a length of $1\frac{1}{2}$ yards. What is the width of the bed?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A robotics club has $1\frac{2}{3}$ meters of filament. Each cable clip needs $\frac{3}{11}$ meter of filament. How many $\frac{3}{11}$ -meter lengths are in the filament, including part of a final length? Show a multiplication check that explains your answer.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find $2/3 \div 4/9$.	$3/2$
2	Find $11/12 \div 1/6$.	$11/2$
3	Find $13/16 \div 2/3$.	$39/32$
4	Find $4/11 \div 6/13$.	$26/33$
5	Find $1\ 1/2 \div 3/4$.	2
6	Find $9/16 \div 3/12$.	$9/4$

PART 2 • APPLY IT

1. **6 labels** Compute $2/3 \div 1/9 = 2/3 \times 9/1 = 6$.
2. **$1/2$ yard** Use area $\div$ length: $3/4 \div 3/2 = 3/4 \times 2/3 = 1/2$.

CHALLENGE

$6\ 1/9$ lengths. Check: $3/11 \times 6\ 1/9 = 1\ 2/3$, so $3/11$ -meter lengths fit into $1\ 2/3$ meters $6\ 1/9$ times.

Accept equivalent simplified fractions, improper fractions, or mixed numbers. For the challenge, accept a correct multiplication check that shows the divisor times the quotient equals the dividend.