Divide Mixed Numbers — Homework

Lesson 6-10 • Standard 6.NOS.1

Name: _____ **Period:** _____ **Date:** _____

Today's Goals

Content: I can explain what dividing with mixed numbers means, rewrite them as improper fractions, find the quotient with common denominators or by multiplying by the reciprocal, and check it by multiplying.

Language: I can explain my steps and why they work, using the words mixed number, improper fraction, convert, reciprocal, and simplify.

Key Words



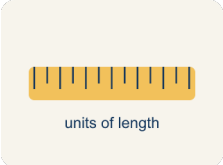
Divide Mixed Numbers (Dividir números mixtos) — Change mixed numbers to improper fractions, then multiply by the reciprocal.



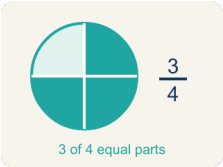
Mixed Number (Número mixto) — A whole number plus a fraction, like 2 1/3.



Improper Fraction (Fracción impropia) — A fraction where the top is bigger than or equal to the bottom, like 7/4.



Convert (Convertir) — To change a number to a new form but keep the same value.



Simplify (Simplificar) — To write a fraction with smaller numbers that names the same amount, like 2/4 = 1/2.



Reciprocal (Recíproco) — A fraction turned upside down. Dividing by a fraction gives the same answer as multiplying by its reciprocal.

Practice

Show your work. Use the blank space under each problem.

1. What is 1 1/2 ÷ 3/4?

A. 1 1/8
B. 2
C. 3/4
D. 9/8

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2. Convert 3 2/5 to an improper fraction.

A. 6/5
B. 15/5
C. 17/5
D. 32/5

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3. Convert each mixed number to an improper fraction, then divide.

Problem	Convert to Improper	The reciprocal shortcut	Quotient
3 1/2 ÷ 1/4	7/2 ÷ 1/4	7/2 × 4/1 = 28/2	
1 3/4 ÷ 1/2	7/4 ÷ 1/2	7/4 × 2/1 = 14/4	
2 1/3 ÷ 7/6	7/3 ÷ 7/6	7/3 × 6/7 = 42/21	
4 1/5 ÷ 3/5	21/5 ÷ 3/5	21/5 × 5/3 = 105/15	

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4. Match each mixed number division to its quotient.

Item	Answer choices
____ 2 1/4 ÷ 3/4	F. 6
____ 4 1/2 ÷ 9/8	E. 7
____ 1 2/3 ÷ 5/6	D. 5
____ 3 1/3 ÷ 2/3	C. 2
____ 5 1/4 ÷ 3/4	B. 4
____ 1 1/2 ÷ 1/4	A. 3

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5. A baker has 2 1/4 cups of butter. Each batch of cookies needs 3/4 cup of butter. How many batches can the baker make?

A. 1 1/2 batches
B. 2 batches
C. 3 batches
D. 6 batches

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6. Spot the Common Mistake

Step 1 (Problem): 3 1/3 ÷ 2/3
Step 2 (Multiply by the reciprocal (skipped converting)): 3 1/3 × 3/2
Step 3 (Multiply the fraction part only): 1/3 × 3/2 = 3/6 = 1/2
Step 4 (Combine with the whole): 3 + 1/2 = 3 1/2

Which step has the mistake? Explain and fix it:

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7. Agent Chen has walked 2 1/4 miles, which is 3/4 of her whole route. How long is the whole route? (2 1/4 ÷ 3/4 asks how much is in one whole route.)

A. 1 11/16 miles
B. 3 miles
C. 1/3 mile

D. 2 1/3 miles

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8. A 4 1/2-cup jar of fingerprint gel fills exactly 1 1/2 test kits. How much gel is in ONE kit? (4 1/2 ÷ 1 1/2 asks how much is in one whole kit.)

A. 6 3/4 cups
B. 1/3 cup
C. 3 cups
D. 4 1/3 cups

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9. Mission 1: The stakeout shift is 4 1/2 hours long. Each agent covers a 1 1/2-hour watch. How many agent watches fill one shift?

A. 2 1/2
B. 3
C. 4 1/2
D. 6

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10. Mission 2: A surveillance route is 3 miles long, split into 1 1/2-mile patrol sections. How many sections are on the route?

A. 1 1/2
B. 2
C. 3
D. 4 1/2
