UNIT 2 · STANDARD 6.NS.1

Divide Fractions

Lesson 2-3

Name: _____ Date: _____ Class: _____

Key Vocabulary

Level 1 support

Picture first, then the word, then a plain-language meaning. Say each word out loud.

In 3/4 ÷ 1/2, the dividend is 3/4 — the total amount being split

Dividend

The number you are splitting up in a division problem.

In 3/4 ÷ 1/2, the divisor is 1/2 — the size of each group

Divisor

The number you split by in a division problem.

The reciprocal of 2/3 is 3/2. To divide by 2/3, multiply by 3/2.

Reciprocal

A fraction turned upside down.

In 3/4 ÷ 1/4 = 3, the quotient is 3 — three 1/4-size pieces fit into 3/4

Quotient

The answer when you divide.

8/12 → GCF is 4 → 8÷4 / 12÷4 = 2/3

Simplify

To make a fraction smaller using the same parts, like 2/4 = 1/2.

Key Ideas & Notes

- Agent Rivera is dividing a 3/4-pound evidence bag into portions that each weigh 1/8 pound.
- She needs to know exactly how many portions she can make for testing.
- Can you solve the case?
- Use the bar model to see how many 1/8-pound portions fit into 3/4 pound.

Think About It

- What is the total weight being divided?
- What is the size of each portion?
- Will the answer be more or less than 1?

My Notes

Guided Examples

Example 1

What is the reciprocal of 3/5?

Solution: To find the reciprocal, flip the fraction. The reciprocal of 3/5 is 5/3.

Answer: A. 5/3

Example 2

What is 1/2 ÷ 1/4?

Solution: 1/2 ÷ 1/4 = 1/2 × 4/1 = 4/2 = 2. Two 1/4-size pieces fit into 1/2.

Answer: A. 2

Example 3

What is 3/4 ÷ 1/8?

Solution: 3/4 ÷ 1/8 = 3/4 × 8/1 = 24/4 = 6. Six 1/8-size pieces fit into 3/4.

Answer: A. 6

Write About the Math

The Writing Revolution

I can explain my steps using the words dividend, divisor, reciprocal, quotient, and simplify.

1. Kernel Sentence

subject + verb

Model: Simplify is to make a fraction smaller using the same parts, like 2/4 = 1/2.
Simplificar es hacer una fracción más pequeña con las mismas partes, como 2/4 = 1/2.

Write a kernel sentence about simplify. Use a subject and a verb.
Escribe una oración base sobre simplificar. Usa un sujeto y un verbo.

2. Sentence Expansion

because · but · so

Kernel: Simplify matters in math
Simplificar importa en matemáticas

Expand the kernel three ways. Add a reason, a contrast, and a result.

because / ***porque***
Simplify matters in math because ____.
Simplificar importa en matemáticas porque ____.

but / ***pero***
Simplify matters in math, but ____.
Simplificar importa en matemáticas, pero ____.

so / ***entonces***
Simplify matters in math, so ____.
Simplificar importa en matemáticas, entonces ____.

3. Sentence Types

4 ways to write a math idea

Statement
Afirmación

Tell one true fact about simplify.
Di un hecho verdadero sobre simplify.

Simplify ____.

Question
Pregunta

Ask a question about simplify.
Haz una pregunta sobre simplify.

How does ____ ?
¿Cómo ____ ?

Exclamation
Exclamación

Show excitement about simplify.
Muestra entusiasmo sobre simplify.

Wow, ____ !
¡Guau, ____ !

Command
Mandato

Tell a partner what to do with simplify.
Dile a un compañero qué hacer con simplify.

First, ____ .
Primero, ____ .

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4. Explain Your Reasoning

use a sentence starter

I flipped the fraction because ____.
Volteé la fracción porque ____.

The answer is ____.
La respuesta es ____.

This helps when ____.
Esto ayuda cuando ____.

Try It

Solve on your own. Check the answer key when you are done.

1. What is 2/3 ÷ 1/3?

A. 2

B. 2/9

C. 1/2

D. 6

Show your work:

2. A recipe needs 2/3 cup of sugar. You only have a 1/6-cup scoop. How many scoops do you need?

A. 4 scoops

B. 3 scoops

C. 6 scoops

D. 2 scoops

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

Is 3/4 ÷ 1/2 the same as 1/2 ÷ 3/4? Solve both and explain why or why not. What does this tell you about the order in division?

Sentence starter: 3/4 ÷ 1/2 = ____ and 1/2 ÷ 3/4 = ____. These are ____ because ____. This shows that division is ____.

Show your work:

Reflect — Exit Ticket

What is 4/5 ÷ 2/5?

A. 2

B. 8/25

C. 2/5

D. 10/5

Your answer:

Answer Key & Teacher Guide

1. **Try It 1:** A. 2 — *2/3 ÷ 1/3 = 2/3 × 3/1 = 6/3 = 2. Two 1/3-size pieces fit into 2/3.*
2. **Try It 2:** A. 4 scoops — *2/3 ÷ 1/6 = 2/3 × 6/1 = 12/3 = 4 scoops.*
3. **Exit Ticket:** A. 2 — *4/5 ÷ 2/5 = 4/5 × 5/2 = 20/10 = 2. Two groups of 2/5 fit into 4/5.*

Writing (TWR) — what to look for

- **Kernel sentence:** A complete sentence needs a subject and a verb. Example: Simplify is to make a fraction smaller using the same parts, like 2/4 = 1/2.
- **Expansion:** *because* gives a reason, *but* shows a contrast or exception, *so* shows a result. Answers vary; each must keep the kernel idea and add the correct kind of detail.
- **Sentence types:** Statement ends with a period, question with "?", exclamation with "!", and a command starts with an action verb (a "bossy" verb).