

Divide Decimals

Lesson 1-7

Name: _____

Date: _____

Class: _____

Key Vocabulary

Level 1 support

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

In $8.4 \div 2.1 = 4$, the dividend is 8.4 – it is the total being split

Dividend

The number you are splitting up in a division problem.

In $8.4 \div 2.1 = 4$, the divisor is 2.1 – it is the size of each group

Divisor

The number you split by in a division problem.

In $8.4 \div 2.1 = 4$, the quotient is 4 – there are 4 groups

Quotient

The answer when you divide.

$8.4 \div 2.1 \rightarrow$ multiply both by 10 $\rightarrow 84 \div 21 = 4$

Decimal division

Dividing with decimals. First make the number you divide by a whole number.

$7.56 \div 0.12 = 756 \div 12 = 63$ (both multiplied by 100)

Equivalent division

Multiplying both numbers by 10 or 100 gives the same answer.

Key Ideas & Notes

- The space station has 18.9 kilograms of a rare mineral sample that must be divided equally among 6.3-kilogram storage pods.
- How many pods can be completely filled?
- Complete the table. Rewrite each decimal division as a whole-number division by multiplying both the dividend and divisor by 10 (or 100), then solve.

Think About It

- What total amount is being divided?
- What is the size of each pod?
- How do you divide when the divisor is a decimal?

My Notes

Guided Examples

Example 1

What is $14.4 \div 1.2$?

Solution: Multiply both by 10: $144 \div 12 = 12$.

Answer: A. 12

Example 2

What is $3.78 \div 0.6$?

Solution: Multiply both by 10: $37.8 \div 6 = 6.3$.

Answer: A. 6.3

Example 3

What is $8.4 \div 0.7$?

Solution: $8.4 \div 0.7 = 84 \div 7 = 12$.

Answer: A. 12

Write About the Math

The Writing Revolution

I can explain my work using the words dividend, divisor, quotient, and equivalent division.

1. Kernel Sentence subject + verb

Model: Decimal division is dividing with decimals. First make the number you divide by a whole number.

División decimal es dividir con decimales. Primero haz entero el número entre el que divides.

Write a kernel sentence about decimal division. Use a subject and a verb.

Escribe una oración base sobre división decimal. Usa un sujeto y un verbo.

2. Sentence Expansion because · but · so

Kernel: Decimal division matters in math

División decimal importa en matemáticas

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

because
porque

Decimal division matters in math because ____.

División decimal importa en matemáticas porque ____.

but
pero

Decimal division matters in math, but ____.

División decimal importa en matemáticas, pero ____.

so
entonces

Decimal division matters in math, so ____.

División decimal importa en matemáticas, entonces ____.

3. Sentence Types 4 ways to write a math idea

Statement
Afirmación

Tell one true fact about decimal division.
Di un hecho verdadero sobre decimal division.

Decimal division ____.

Question
Pregunta

Ask a question about decimal division.
Haz una pregunta sobre decimal division.

How does ____ ?

¿Cómo ____ ?

Exclamation
Exclamación

Show excitement about decimal division.
Muestra entusiasmo sobre decimal division.

Wow, ____ !

¡Guau, ____ !

Command
Mandato

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

First, ____ .

Primero, ____ .

4. Explain Your Reasoning use a sentence starter

First I moved the decimal because ____.

Primero moví el decimal porque ____.

The quotient is ____.

El cociente es ____.

I would use this to ____.

Usaría esto para ____.

Try It

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

1. What is $15.6 \div 1.3$?

- A. 12
- B. 1.2
- C. 120
- D. 13

Show your work:

2. A ribbon is 16.8 feet long. You cut it into pieces that are each 2.4 feet long. How many pieces do you get?

- A. 7 pieces
- B. 8 pieces
- C. 6 pieces
- D. 14.4 pieces

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A gas station sells fuel at \$3.45 per gallon. A customer pays \$27.60 total. How many gallons did the customer buy? Set up the decimal division, show how to convert it to whole-number division, and solve.

Sentence starter: The equation is $\$27.60 \div \$3.45 = \underline{\quad}$. I multiply both by $\underline{\quad}$ to get $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ gallons.

Show your work:

Reflect — Exit Ticket

What is $19.2 \div 0.8$?

- A. 24
- B. 2.4
- C. 240
- D. 0.24

Your answer:

Answer Key & Teacher Guide

1. **Try It 1:** A. 12 — *Multiply both by 10: $156 \div 13 = 12$.*
2. **Try It 2:** A. 7 pieces — *$16.8 \div 2.4$: multiply both by 10 $\rightarrow 168 \div 24 = 7$ pieces.*
3. **Exit Ticket:** A. 24 — *Multiply both by 10: $192 \div 8 = 24$.*

Writing (TWR) — what to look for

- **Kernel sentence:** A complete sentence needs a subject and a verb. Example: Decimal division is dividing with decimals. First make the number you divide by a whole number.
- **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).