

Multiply Decimals

Lesson 1-6

Name: _____

Date: _____

Class: _____

Key Vocabulary

Level 1 support

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

$$4 \times 7 = 28, \text{ so the product is } 28$$

Product

The answer when you multiply.

In 3.25, the decimal point separates 3 (ones) from 25 (tenths and hundredths)

Decimal point

The dot that splits the whole number from the part after it.

3.7 × 4.2: round to 4 × 4 = 16, so the exact answer should be near 16

Estimate

A close answer you get by rounding first.

In 0.36: the 3 is in the tenths place (0.3) and the 6 is in the hundredths place (0.06)

Place value

What a digit is worth based on where it sits in a number.

$$3.4 \text{ (1 place)} \times 2.6 \text{ (1 place)} = 8.84 \text{ (2 places total)}$$

Decimal places

How many digits come after the decimal point.

Key Ideas & Notes

- The station needs 4.5 meters of heat shielding that costs \$12.60 per meter.
- Commander Diaz needs to calculate the total cost before submitting the supply order.
- What is the total cost of the shielding?
- Estimate each product by rounding, then sort: which products are GREATER than 20 and which are LESS than 20?

Think About It

- What two quantities are being multiplied?
- How many total decimal places do the two factors have?
- How can estimating help you check if your answer is reasonable?

My Notes

Guided Examples

Example 1

What is 3.4×2.6 ?

Solution: $34 \times 26 = 884$. There are 2 total decimal places ($1 + 1$), so place the decimal to get 8.84.

Answer: A. 8.84

Example 2

What is 0.7×1.5 ?

Solution: $7 \times 15 = 105$. There are 2 total decimal places ($1 + 1$), so place the decimal to get 1.05.

Answer: A. 1.05

Example 3

What is 5.3×4 ?

Solution: $53 \times 4 = 212$. There is 1 total decimal place, so place the decimal to get 21.2.

Answer: A. 21.2

Write About the Math

The Writing Revolution

I can explain my work using the words product, decimal point, estimate, and decimal places.

1. Kernel Sentence subject + verb

Model: Decimal point is the dot that splits the whole number from the part after it.
Punto decimal es el punto que separa el número entero de la parte que sigue.

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

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

2. Sentence Expansion because · but · so

Kernel: Decimal point matters in math
Punto decimal importa en matemáticas

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

because
porque

Decimal point matters in math because ____.
Punto decimal importa en matemáticas porque ____.

but
pero

Decimal point matters in math, but ____.
Punto decimal importa en matemáticas, pero ____.

so
entonces

Decimal point matters in math, so ____.
Punto decimal importa en matemáticas, entonces ____.

3. Sentence Types 4 ways to write a math idea

Statement
Afirmación

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

Decimal point ____.

Question
Pregunta

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

How does ____ ?
¿Cómo ____ ?

Exclamation
Exclamación

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

Wow, ____ !
¡Guau, ____ !

Command
Mandato

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

First, ____ .
Primero, ____ .

4. Explain Your Reasoning use a sentence starter

I counted ____ **decimal places.**

Conté ____ *lugares decimales.*

The product is ____ **because** ____.

El producto es ____ *porque* ____.

This happens in real life when ____.

Esto pasa en la vida real cuando ____.

Try It

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

1. Which estimate is closest to 4.8×3.2 ?

- A. $5 \times 3 = 15$
- B. $4 \times 3 = 12$
- C. $5 \times 4 = 20$
- D. $48 \times 32 = 1,536$

Show your work:

2. A car travels 55.5 miles per hour for 2.4 hours. How far does it go?

- A. 133.2 miles
- B. 13.32 miles
- C. 1,332 miles
- D. 57.9 miles

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A family buys 3.5 pounds of deli meat at \$6.80 per pound. Show how to find the total cost. Use estimation to check if your answer is reasonable.

Sentence starter: The total cost is \$___ because $3.5 \times \$6.80 = \underline{\quad}$. I can estimate: $\underline{\quad} \times \underline{\quad} = \underline{\quad}$, which is close to my exact answer, so it is reasonable.

Show your work:

Reflect — Exit Ticket

What is 4.6×2.3 ?

- A. 10.58
- B. 105.8
- C. 1.058
- D. 10.48

Your answer:

Answer Key & Teacher Guide

1. **Try It 1:** A. $5 \times 3 = 15$ — Round 4.8 to 5 and 3.2 to 3. The estimate $5 \times 3 = 15$ is closest to the exact answer 15.36.
2. **Try It 2:** A. 133.2 miles — $555 \times 24 = 13,320$. Total decimal places: $1 + 1 = 2$. Answer: $133.20 = 133.2$ miles.
3. **Exit Ticket:** A. 10.58 — $46 \times 23 = 1,058$. There are 2 total decimal places ($1 + 1$), so the answer is 10.58.

Writing (TWR) — what to look for

- **Kernel sentence:** A complete sentence needs a subject and a verb. Example: Decimal point is the dot that splits the whole number from the part after it.
- **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).