



Relevancy, Data, & Environmental Connections in *California Math & YOU*

California Math & YOU emphasizes the importance of data and its real-world applications to make math relevant and engaging for students of all grade levels. By incorporating real-world data and applications, *California Math & YOU* helps students see the importance of math in their everyday lives and future careers.

Connect to Real Life

Example The Lake Pontchartrain Causeway in Louisiana is about 24 miles long. The Bay Bridge in California is about 8 miles long. How many times longer is the Lake Pontchartrain Causeway than the Bay Bridge?

| Length of Lake Pontchartrain Causeway (in miles) | Length of Bay Bridge (in miles) |
|--|---------------------------------|
| 24 | 8 |

$24 \div 8 = 3$

So, the Lake Pontchartrain Causeway is about **3** times longer than the Bay Bridge.

In-Class Practice

15. The Babby Bridge on Highway 1 is about 700 feet long and about 200 feet high. Write a sentence that compares the length and height of the bridge.

16. The Sundial Bridge in Redding is 700 feet long. You walked 50 feet every minute across the bridge. How long did it take you to walk across the bridge?

minutes

156



Connect to Real Life

The **Connect to Real Life** pages make mathematics meaningful with engaging, colorful, and relevant real-life examples, helping students see the value of what they're learning.



Math Talks

Math Talk callouts encourage classroom discussions, helping students articulate their understanding and see the practical application of math in real-world contexts.

Math Talk

- Write the expression in Exercise 5 on the board.
- Allow time (1–4 minutes) for students to evaluate the expression silently and mentally.
- Ask several volunteers to share how they found the value of the expression. Record their thinking on the board.
- As students engage in this Math Talk, listen to the language students use and look for any misconceptions.



Real-Life STEAM/STEM Videos

Engaging **STEAM Videos (3–8)** and **STEM Videos (9–12)** throughout the program connect math to real-life topics such as product design, environmental phenomena, and human biology, demonstrating the importance of math in various fields of study. Students can complete the corresponding **STEAM/STEM Performance Task**, giving them further opportunities to connect to real life.





Career-Themed Chapters

Every chapter in *California Math & YOU* features a specific career and includes **Career Explorations** videos (K–8) and **Everyday Explorations** videos (9–12) that further explore how real-life professionals use math, inspiring students to see the value of math in their future careers. Each chapter concludes with a **Performance Task** connected to this career, deepening the real-world relevance.



Data Talks

Data Talk callouts build students' data literacy by prompting them to analyze and discuss data displays, fostering a deeper understanding of how data influences their world.

Data Talk

- ? "Who might be interested in studying these statistics?"
- "The EPA recommends installing radon mitigation systems in buildings that measure more than 4 picocuries per liter (pCi/L)."
- ? "Which zone(s) may choose to install radon mitigation systems? Explain."



Environmental Principles

The **Environmental Principles & Concepts (EP&Cs)** are integrated into each chapter. Accompanying teacher notes further emphasize the connections being made to the EP&Cs.



Data Talk
? "Who might be interested in studying these statistics?"
• "The EPA recommends installing radon mitigation systems in buildings that measure more than 4 picocuries per liter (pCi/L)."
? "Which zone(s) may choose to install radon mitigation systems? Explain."

Environmental Principle 5
? "How can measuring radon levels help make decisions to keep people safe?"

Answers
6. $x < 2$

The graph of an inequality shows all the solutions of the inequality on a number line.

- An open circle (○) is used when a number is not a solution.
- A closed circle (●) is used when a number is a solution.
- An arrow shows that the graph continues in that direction.

Example 3 Connecting to Data

Radon is a radioactive gas that can enter buildings through cracks in their foundations. Write and graph an inequality that represents potential average indoor radon levels for Zone 1 in California.

Problem Solving Plan

1. Read the problem carefully.
2. Write and graph an inequality.
3. Check your work.
4. Write a conclusion.

Work on It

Read The EPA recommends installing radon mitigation systems in buildings that measure more than 4 picocuries per liter (pCi/L).

Write Write and graph an inequality that represents potential average indoor radon levels for Zone 1 in California.

Work on It

Zone 1 has potential average indoor radon levels greater than 4 picocuries per liter (pCi/L).

Write $x > 4$

Graph Let x be the potential average indoor radon level.

Inequality $x > 4$

Graph the inequality.

Graph the number line on the axis below you found the solution.

In-Class Practice

Write and graph an inequality that represents potential average indoor radon levels for Zone 3.

Work on It

1. Read the problem carefully.
2. Write and graph an inequality.
3. Check your work.
4. Write a conclusion.

Answers

6. $x < 2$

18.4's Math

Closure

"Write an inequality for each graph. Describe all values of x that make the inequality true."

a. $x > -2$, all values of x greater than or equal to -3

b. $x < 4.5$, all values of x less than or equal to 4.5

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