Algebra 1B Live Lesson

U2L2 - Scientific Notation
(Chapter 7-2 in textbook)

Agenda

1. Review selected problems and topics from U2L2 (Chapter 7-2 in textbook).

2. Use the 2-column note system to take better notes in math class. Bring your math notebook and pen or pencil to each math LiveLesson class.

2-Column Notes Template

1. Announcements/To Do's	1. Write down important details.
2. School-Wide Learner Outcomes	2. What are you going to work on this week?
3. LL Objectives	
4. Vocabulary words	4. Definitions (fill in as we go)
5. Problems	5. Steps to solving problems
6. Summary (End of class)	6. 1 or 2 sentences about the LL class.

Reminders and To – Do's

Information	What to do
1. Complete 1 math lesson per day.	1. Go to your Planner in Connexus to find the math lesson for the day
2. Check your WebMail every day	2. Go to Connexus to find WebMail
3. Be prepared to spend 4 - 6 hours per day on schoolwork.	3. Complete lessons for the day from your Planner. Do not get behind on lessons.
4. Remind your Learning Coach to take daily attendance	4. Have your Learning Coach log into Connexus daily.

Reminders and To – Do's

Information	What to do
5. Go to the Message Board first for information about our math class.	
6. Contact Mr. Elizondo for math questions. Remember: You need at least 2 phone calls with Mr. Elizondo per semester.	6. Call (559) 549 - 3244 and leave a voicemail if call is not answered. Make an appointment at: https://elizondo.youcanbook.me Send a WebMail

U2L2 - California Common Core State Standards

- HSF-IF.C.8: Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

U2L2 - Objectives

- Write numbers in scientific and standard notation
- Compare and order numbers in scientific notation

U2L2 - Introduction

- You can use powers of 10 to write and compare very large or very small numbers more easily.
- *Scientific notation* is a shorthand way to write numbers using powers of 10.

U2L2 – Scientific Notation

take note

Key Concept Scientific Notation

A number in **scientific notation** is written as the product of two factors in the form $a \times 10^n$, where n is an integer and $1 \leq a < 10$.

Examples 8.3×10^5 4.12×10^{22} 7.1×10^{-5}

U2L2 – Recognizing Scientific Notation

Is the number written in scientific notation? If not, explain.

0.23×10^{-3}	No, because 0.23 is less than 1.
2.3×10^{7}	Yes
9.4×100^{9}	No, because 100^{9} is not in the form 10^{n}

U2L2 – Writing a number in Scientific Notation

What is each number written in scientific notation?

A. approximate distance between the Sun and Saturn: 1,430,000,000 km

$1,430,000,000. = 1.43 \times 10^{9}$

B. the radius of an atom: 0.0000000001 m

$0.0000000001 = 1 \times 10^{-10}$

U2L2 – Writing a number in Standard Notation

What is each number written in standard notation?

A. weight of an Asian elephant: 5.5×10^6 g

$5.5 \times 10^6 = 5{,}500{,}000.$

B. the weight of an ant: 3.1×10^{-3} g

$3.1 \times 10^{-3} = 0.0031$

U2L2 – Using Scientific Notation to Order Numbers

What is the order of 49.7×10, 4.17×10^7, 0.047×10^9, and 495 from least to greatest?

$49.7 \times 10 = 4.97 \times 10^2$

$4.17 \times 10^7 = 4.17 \times 10^7$

$0.047 \times 10^9 = 4.7 \times 10^7$

$495 = 4.95 \times 10^2$

4.95×10^2 4.97×10^2 4.17×10^7 4.7×10^7

495 **49.7×10** **4.17×10^7** **0.047×10^9**

U2L2 Review (What we learned from this LL)

- Recognize Scientific Notation
- Writing a Number in Scientific Notation
- Writing a Number in Standard Notation
- Using Scientific Notation to Order Numbers

Questions?

- Check the Message Board first
- Send a WebMail
- You can also make an appointment at https://elizondo.youcanbook.me
- You can also call me at (559) 549-3244. If I'm not available to answer your call, please leave a voicemail with your full name and phone number.