

Adding & Subtracting in Scientific Notation: Big Numbers Project

Name: _____ Date: _____

LEARNING OBJECTIVE

Students will add and subtract numbers in scientific notation by first matching exponents.

MATERIALS NEEDED

- calculator
- index cards
- notebook paper
- ruler

HANDS-ON ACTIVITY

1. On index cards, write 4 large numbers in scientific notation with different exponents (for example, 3.2×10^5 , 4.5×10^4 , 1.1×10^6 , 8×10^3), representing a fictional scenario such as 4 towns' populations.
2. Convert all 4 numbers to the same power of 10, rewriting coefficients so exponents match the largest one, showing your work.
3. Add all 4 adjusted numbers together to find a combined total, writing the result back in proper scientific notation.
4. Subtract the smallest original value from the largest original value, again matching exponents first.
5. Draw a simple bar-style chart comparing your 4 original numbers with bars roughly proportional to their sizes.

QUESTIONS

1. **Why must exponents match before adding or subtracting numbers in scientific notation?**

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2. **What is 3.2×10^5 plus 4.5×10^4 , after matching exponents first?**

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3. **What was the combined total of your 4 numbers, in proper scientific notation?**

4. What is the difference between your largest and smallest original numbers?
