

**Lesson: Enrichment for Scientific Notation**

**Sixth Grade Objective:** 1.06 Use exponential, scientific, and calculator notation to write very large and very small numbers.

**Review.**

**Try these on your own!**

1. How would 0.0004568 be expressed in scientific notation?
2. What is  $9.6 \times 10^7$  written in standard form?
3. What is  $9.6 \times 10^{-7}$  written in standard form?
4. What is the difference between problem two and three?
5. Write 95,000,000,000 in scientific notation.

**Check your answers**

1.  $4.568 \times 10^{-4}$
2. 96,000,000
3. 0.00000096
4. The exponent in problem two is positive so move the decimal point to the right seven places and add six zeros. In problem three the exponent is negative so move the decimal point to the left seven places and add six zeros.
5.  $9.5 \times 10^{10}$

**ACTIVITY 1:**

**Write in scientific notation.**

1. 86,000,000
2. 0.000008
3. 878,000,000,000
4. 0.000007
5. 123,340,000
6. 78,000
7. 0.000432
8. 0.87653
9. 34,000,000
10. 450

## ACTIVITY 2:

Write in standard form.

1.  $7.89 \times 10^{-3}$
2.  $67.2 \times 10^4$
3.  $5.4 \times 10^5$
4.  $5.764 \times 10^{-10}$
5.  $3.4 \times 10^{-6}$

Extra Practice!

<http://www.aaamath.com/dec71i-dec2sci.html>

**CHECK YOUR ANSWERS!**

## ACTIVITY 1:

Write in scientific notation.

1.  $8.6 \times 10^7$
2.  $8 \times 10^{-6}$
3.  $8.78 \times 10^{11}$
4.  $7 \times 10^{-6}$
5.  $1.2334 \times 10^8$
6.  $7.8 \times 10^4$
7.  $4.32 \times 10^{-4}$
8.  $8.7653 \times 10^{-1}$
9.  $3.4 \times 10^7$
10.  $4.5 \times 10^2$

## ACTIVITY 2:

Write in standard form.

1.  $7.89 \times 10^{-3} = 0.00789$
2.  $6.72 \times 10^8 = 672,000,000$
3.  $5.4 \times 10^5 = 540,000$
4.  $5.764 \times 10^{-10} = 0.0000000005764$
5.  $3.4 \times 10^{-6} = 0.0000034$