

Using Scientific Notation

Essential Question:

How do you write a number in scientific notation?

Scientific Notation: a number is written in scientific notation when it is of the form $c \times 10^n$ where c is a number between 1 and 10 and the exponent n , is an integer.

<u>Number</u>	<u>Standard form</u>	<u>Scientific Notation</u>
Two Million	2,000,000	2×10^6
Five Thousandths	0.005	5×10^{-3}

Write the following numbers in scientific notation

1. 42,590,000 _____

3. 3,890,000,000 _____

2. 0.0000574 _____

4. 0.0000987 _____

Write the following numbers in standard form

5. 2.0075×10^6 _____

7. 7.098×10^8 _____

6. 1.6485×10^{-4} _____

8. 3.091×10^{-5} _____

Computing numbers in scientific notation

Evaluate the expression

9. $(4.4 \times 10^3)(1.5 \times 10^{-7})$ _____

12. $(4.4 \times 10^3)(1.5 \times 10^{-7})$ _____

10. $\frac{9 \times 10^7}{3 \times 10^4}$ _____

13. $\frac{16 \times 10^5}{2 \times 10^{-2}}$ _____

11. $\frac{(8 \times 10^7)(5 \times 10^{-2})}{2 \times 10^4}$ _____