NAME: _____ DATE: _____ PERIOD: ____

Scientific Notation

Evidence Notebook

Key Ideas

1. Why do we use scientific notation?

2. Rewrite $10^5 \times 10^8$ by combining the exponents and solve it:

3. Rewrite $\frac{10^9}{10^5}$ by combining the exponents and solve it:

4. When writing a number in scientific notation, the decimal place must be placed where?

5. Rewrite the following numbers in scientific notation:
   a. The speed of light, 300,000,000 m/s

   b. Distance from Earth to Neptune m

6. Calculate the time required for light to travel from Neptune to Earth when Earth and Neptune are 4.6×10^{12} meters apart. Note that the speed of light is $3.0 \times 10^8 m/s$.
   Step 1

   Step 2

   Step 3

Name: _____ **Date:** _____ **Period:** ____

Checkpoints

1. $(4 \times 10^3 km) \times (3 \times 10^3 km)$

2. $(2.5 \times 10^{-2} m) \times (4.0 \times 10^{-3} m)$

3. $(1.2 \times 10^2 m/s) \times (2.3 \times 10^6 s)$

4. $(1.4 \times 10^2 cm) \times (5.8 \times 10^2 cm) \times (7.3 \times 10^2 cm)$

5. $\frac{9 \times 10^6 kg}{3\ cm^3}$

6. $\frac{5.06 \times 10^2 L}{8.8 \times 10^7 s}$

7. $\frac{2.50 \times 10^2 cm^3}{5.9 \times 10^8 cm}$