

Name : _____

Scientific Notation

Mul/Div: ES3

Simplify and express in scientific notation:

Example 1

$$\begin{aligned}\frac{15 \times 10^6}{8 \times 10^3} &= \frac{15}{8} \times 10^6 \times 10^{-3} \\ &= 1.875 \times 10^3 \\ &= \mathbf{1.875 \times 10^3}\end{aligned}$$

Example 2

$$\begin{aligned}(7 \times 10^6) (5 \times 10^7) \\ (7 \times 10^6) (5 \times 10^7) &= 35 \times 10^6 \times 10^7 \\ &= 35 \times 10^{13} \\ &= \mathbf{3.5 \times 10^{14}}\end{aligned}$$

Simplify each problem and express the answer in scientific notation.

1) $\frac{13 \times 10^8}{5 \times 10^6}$

3) $(6 \times 10^2) (3 \times 10^4)$

5) $\frac{13 \times 10^9}{4 \times 10^7}$

7) $\frac{30 \times 10^5}{6 \times 10^4}$

8) $(8 \times 10^7) (2 \times 10^5)$

10⁹)

10⁶)