

Scientific Notation

Simplify and express in scientific notation:

Example 1

$$(6 \times 10^3) (2 \times 10^5)$$

$$\begin{aligned} (6 \times 10^3) (2 \times 10^5) &= 12 \times 10^3 \times 10^5 \\ &= 12 \times 10^8 \\ &= \mathbf{1.2 \times 10^9} \end{aligned}$$

Example 2

$$\begin{aligned} \frac{18 \times 10^6}{4 \times 10^4} &= \frac{18}{4} \times 10^6 \times 10^{-4} \\ &= \mathbf{4.5 \times 10^2} \end{aligned}$$

Simplify each problem and express the answer in scientific notation.

1) $(7 \times 10^8) (9 \times 10^6)$

Answer : _____ X 10 _____

2) $\frac{3 \times 10^4}{8 \times 10}$

Answer : _____ X 10 _____

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

Answer : _____ X 10 _____

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

Answer : _____ X 10 _____

5) $(3 \times 10^7) (9 \times 10^6)$

Answer : _____ X 10 _____

6) $\frac{4 \times 10^5}{16 \times 10^2}$

Answer : _____ X 10 _____

7) $\frac{9 \times 10^5}{10 \times 10^3}$

Answer : _____ X 10 _____

8) $(11 \times 10^4) (7 \times 10^2)$

Answer : _____ X 10 _____