Name : _____ Score : _____

# Scientific Notation

Simplify and express in scientific notation:

Example 1

$$\frac{2.5 \times 10^{6}}{0.5 \times 10^{3}} = \frac{2.5}{0.5} \times 10^{6} \times 10^{-3}$$

$$= \mathbf{5 \times 10^{3}}$$

Example 2

$$(3.5 \times 10^{4})\,(0.4 \times 10^{-7})$$

$$(3.5 \times 10^{4})\,(0.4 \times 10^{-7}) = 1.4 \times 10^{4} \times 10^{-7}$$

$$= \mathbf{1.4 \times 10^{-3}}$$

Simplify each problem and express the answer in scientific notation.

1) $\frac{8.14 \times 10^{2}}{2 \times 10^{4}}$

Answer : _____

2) $(0.6 \times 10^{3})\,(1.4 \times 10^{5})$

Answer : _____

3) $\frac{0.24 \times 10^{5}}{0.5 \times 10^{-7}}$

Answer : _____

4) $(4.02 \times 10^{7})\,(0.9 \times 10^{-4})$

Answer : _____

5) $(3.7 \times 10^{-2})\,(6.4 \times 10^{-6})$

Answer : _____

6) $\frac{5.10 \times 10^{9}}{0.6 \times 10^{-6}}$

Answer : _____

7) $\frac{2.78 \times 10^{-3}}{0.8 \times 10^{-2}}$

Answer : _____

8) $(0.2 \times 10)\,(7.2 \times 10^{5})$

Answer : _____

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# Answer key

Simplify and express in scientific notation:

Example 1

$$\frac{2.5 \times 10^{6}}{0.5 \times 10^{3}} = \frac{2.5}{0.5} \times 10^{6} \times 10^{-3}$$

$$= \mathbf{5 \times 10^{3}}$$

Example 2

$$(3.5 \times 10^{4})\,(0.4 \times 10^{-7})$$

$$(3.5 \times 10^{4})\,(0.4 \times 10^{-7}) = 1.4 \times 10^{4} \times 10^{-7}$$

$$= \mathbf{1.4 \times 10^{-3}}$$

Simplify each problem and express the answer in scientific notation.

1) $\frac{8.14 \times 10^{2}}{2 \times 10^{4}}$

Answer : **$4.07 \times 10^{-2}$**

2) $(0.6 \times 10^{3})\,(1.4 \times 10^{5})$

Answer : **$8.4 \times 10^{7}$**

3) $\frac{0.24 \times 10^{5}}{0.5 \times 10^{-7}}$

Answer : **$4.8 \times 10^{11}$**

4) $(4.02 \times 10^{7})\,(0.9 \times 10^{-4})$

Answer : **$3.618 \times 10^{3}$**

5) $(3.7 \times 10^{-2})\,(6.4 \times 10^{-6})$

Answer : **$2.368 \times 10^{-7}$**

6) $\frac{5.10 \times 10^{9}}{0.6 \times 10^{-6}}$

Answer : **$8.5 \times 10^{15}$**

7) $\frac{2.78 \times 10^{-3}}{0.8 \times 10^{-2}}$

Answer : **$3.475 \times 10^{-1}$**

8) $(0.2 \times 10)\,(7.2 \times 10^{5})$

Answer : **$1.44 \times 10^{6}$**