

Reteaching 4-9

Scientific Notation

Write each number in scientific notation, then multiply: $(8,600,000)(0.0042)$.

8.6 is between 1
and 10

$$8,600,000. = 8.6 \times 10^6$$

6 places
to the left

4.2 is between 1
and 10

$$0.0042 = 4.2 \times 10^{-3}$$

3 places
to the right

$$\begin{aligned} (8.6 \times 10^6)(4.2 \times 10^{-3}) &= 8.6 \times 4.2 \times 10^6 \times 10^{-3} \\ &= 36.12 \times 10^6 \times 10^{-3} \\ &= 36.12 \times 10^3 \\ &= 3.612 \times 10^1 \times 10^3 \\ &= 3.612 \times 10^4 \end{aligned}$$

Use the commutative property of multiplication.

Multiply 8.6 and 4.2.

Add the exponents.

Write 36.12 as 3.612×10^1 .

Add the exponents.

Write each number in scientific notation.

- | | |
|----------------------|------------------|
| 1. 745 million _____ | 2. 0.00034 _____ |
| 3. 888,200,000 _____ | 4. 5,700 _____ |

Multiply. Write your result using scientific notation.

5. $(1.6 \times 10^6)(3.7 \times 10^4)$ _____
6. $(3 \times 10^{-4})(2 \times 10^{-5})$ _____
7. $72,000 \times 143,000$ _____
8. $(2.3 \times 10^{-2})(1.5 \times 10^4)$ _____