

8th Grade Lesson 76

- I can multiply with scientific notation.

Review

Multiply...

$$4 \cdot 1000 \cdot 100$$
$$4 \cdot 100,000$$

$$4 \cdot 10^3 \cdot 10^2$$

$$4 \cdot 10^5$$

$$4 \cdot 10^5$$

MULTIPLICATION WITH SCIENTIFIC NOTATION

To multiply numbers in scientific notation, multiply the numbers and add the exponents (the powers of 10). Then write the product in scientific notation.

$$(4 \cdot 10^5) \cdot (2 \cdot 10^{-2})$$
$$4 \cdot 2 \cdot 10^5 \cdot 10^{-2}$$
$$8 \cdot 10^3$$

$$(3 \cdot 10^8) \cdot (3 \cdot 10^3)$$
$$3 \cdot 3 \cdot 10^8 \cdot 10^3$$
$$9 \cdot 10^{11}$$

$$(4 \cdot 10^{-6}) \cdot (6.2 \cdot 10^4)$$

$$4 \cdot 6.2 \cdot 10^{-6} \cdot 10^4$$

$$24.8 \cdot 10^{-2} \leftarrow \text{not scientific notation}$$

$$\begin{array}{r} 6.2 \\ \times 4 \\ \hline 24.8 \end{array}$$

$$(2.48 \cdot 10^1) \cdot 10^{-2}$$

$$2.48 \cdot 10^{-1}$$

Assignment:

Problem Set 76 #1-6, 8, 9,
13-17, 19-24

<i>Lesson 76</i>	<i>Name</i> _____
$(4 \cdot 10^{-4}) \cdot (2 \cdot 10^{14})$	$(3 \cdot 10^6) \cdot (3 \cdot 10^{-2})$
$(2.1 \cdot 10^{10}) \cdot (2 \cdot 10^3)$	$(4 \cdot 10^{-5}) \cdot (3 \cdot 10^{-8})$

<i>Lesson 76</i>	<i>Name</i> _____
$(4 \cdot 10^{-4}) \cdot (2 \cdot 10^{14})$	$(3 \cdot 10^6) \cdot (3 \cdot 10^{-2})$
$(2.1 \cdot 10^{10}) \cdot (2 \cdot 10^3)$	$(4 \cdot 10^{-5}) \cdot (3 \cdot 10^{-8})$