

Name _____

Date _____

Aim: How can we multiply and divide in scientific notation?

D O N O W :

- Write each number in standard form.
 - 4.603×10^4
 - 5.1×10^{-3}
- Write each number in scientific notation.
 - 1,308,000
 - 0.00062
- Simplify each expression as a single power (hint: laws of exponents)
 - $10^2 \times 10^3$
 - $10^{-4} \times 10^6$
 - $10^6 \div 10^3$
 - $10^2 \div 10^5$

Standard Form: (210,000,000)(32,000)

Multiplying in Scientific Notation

Scientific Notation: () ()

Step 1:

Step 2:

Step 3:

Practice

- $(2.3 \times 10^4)(1.2 \times 10^6)$
- $(7.6 \times 10^3)(1.2 \times 10^{-4})$
- $(3.4 \times 10^2)(2.3 \times 10^1)$

Dividing in Scientific Notation

$$\frac{(4.0 \times 10^3)}{(2.0 \times 10^2)}$$

Step 1:

Step 2:

Step 3:

4.) $\frac{(1.44 \times 10^2)}{(1.2 \times 10^5)}$

5.) $\frac{(6.2 \times 10^6)}{(3.1 \times 10^2)}$

6.) $\frac{(1.96 \times 10^6)}{(0.7 \times 10^{-3})}$

Multiplying/Dividing Practice

$$\frac{(9.2 \times 10^2)(5.4 \times 10^5)}{(2.0 \times 10^3)}$$

What if your answer is not in scientific notation?

Change the following numbers to scientific notation.

7.) 12.4×10^3

8.) 0.0042×10^3

9.) 563×10^{-3}

10.) 0.024×10^{-2}



When multiplying and dividing numbers in scientific notation, we first must multiply/divide the _____ and then must use _____ for the powers.