

Scientific Notation~Day 2

DHW Check

Daily Number 2-2

Box 3: Day 1~Scientific Notation # 1

Box 4: Day 1~Scientific Notation # 9

<https://www.youtube.com/watch?v=AWof6knvQwE>

Extra Practice

EE \Rightarrow $\times 10$

Rewrite in decimal form.

1. 3.79×10^5

2. 2.5×10^{-2}

3. 8.44×10^1

4. 6.5393×10^4

Extra Practice

Rewrite in scientific notation.

1) 7,960,000,000

2) 0.007485

3) 45.668

4) 998.653

5) 0.0000056388

Addition and Subtraction

Before numbers in scientific notation can be added or subtracted, the exponents must be equal.

$$\begin{aligned} & \begin{array}{c} \text{Not equal} \\ \swarrow \quad \searrow \\ (3.4 \times 10^2) + (4.57 \times 10^3) \end{array} = \begin{array}{c} \text{Equal} \\ \swarrow \quad \searrow \\ (0.34 \times 10^3) + (4.57 \times 10^3) \end{array} \\ & \begin{array}{c} \uparrow \\ \text{The decimal is moved} \\ \text{to the left to increase} \\ \text{the exponent.} \end{array} \quad \begin{array}{c} \uparrow \\ = (0.34 + 4.57) \times 10^3 \\ = 4.91 \times 10^3 \end{array} \end{aligned}$$

$$\begin{array}{r} 9.70 \\ + .83 \\ \hline 10.53 \end{array}$$

1) $(9.70 \times 10^6) + (8.3 \times 10^5)$

$$9.70 \times 10^6 + .83 \times 10^6$$

$$(9.70 + .83) \times 10^6$$

$$10.53 \times 10^6$$

2) $(3.67 \times 10^2) - (1.6 \times 10^1)$

$$(3.67 \times 10^2) - (.16 \times 10^2)$$

$$(3.67 - .16) \times 10^2$$

$$3.51 \times 10^2$$

(Method 2) Adding and Subtracting with Scientific Notation

- 1) Convert numbers to standard form.
- 2) Complete the operation (+, -, x, divide)
- 3) Write answer in the form asked (scientific notation or standard form)

Solve using method 2. Do you get the same answers?

1) $(9.70 \times 10^6) + (8.3 \times 10^5)$

$$\begin{array}{r} 9700000 \\ + 830000 \\ \hline 10530000 \end{array}$$

$9700000 + 830000 = 1.053 \times 10^7$

2) $(3.67 \times 10^2) - (1.6 \times 10^1)$

$$\begin{array}{r} 367 \\ - 16 \\ \hline 351 \end{array}$$

$367 - 16 = 351 = 3.51 \times 10^2$