## **Adding & Subtracting in Scientific Notation**

Ex:) Find the sum or difference. A.  $(4.6 \times 10^3) + (8.72 \times 10^3)$ 

Notes:

B. 
$$(3.5 \times 10^{-2}) - (6.6 \times 10^{-3})$$

In Example 1(b), you will get the same answer by rewriting  $3.5 \times 10^{-2}$  as  $35 \times 10^{-3}$ .

OYO:) Find the sum or difference.

 $(7.8 \times 10^{-5}) - (4.5 \times 10^{-5})$ 

В.

Notes:

A. 
$$(8.2 \times 10^2) + (3.41 \times 10^{-1})$$

Multip	olving	in	<b>Scientific</b>	<b>Notation</b>
	1		•••••	

Ex:) Multiply. 
$$(3\times10^{-5})\times(5\times10^{-2})$$

Notes:

OYO:) Multiply. 
$$(2\times10^4)\times(6\times10^{-7})$$

Notes:

## **Dividing in Scientific Notation**

Ex:) Divide.

$$\frac{1.5\times10^{-8}}{6\times10^7}$$

Notes:

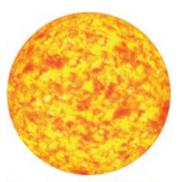
OYO:) Divide. 
$$(1.5 \times 10^{-3}) \div (7.5 \times 10^{2})$$

Notes:

## **Modeling Real Life**

Ex:) An aluminum ion has a diameter of about  $5\times10^{-11}$  meter. How many times greater is the diameter of the sun than the diameter of the ion?





Diameter ≈ 1,400,000,000 m

OYO:) A person typically breathes about  $8.64\times10^3$  liters of air per day. The life expectancy of a person in the United States at birth is about 29,200 days. Estimate the total amount of air a person born in the United States breathes over a lifetime.

Notes: