

Chem 100

In-class worksheet

Working with scientific notation

1. Write the following in scientific notation:

10,000

450.01

8,000,001

0.0001001

0.4569

10

120

0.0202

2. Convert this scientific notation to the conventional decimal format.

5.0×10^{-3}

8.25×10^6

140×10^{-2}

88×10^4

3. Without using a calculator, solve the following problems:

$$\frac{10^6 \times 10^5}{10^{-3}} =$$

$$\frac{10^4}{(10^2 \times 10^{-3})} =$$

$$\frac{(1 \times 10^6)(1 \times 10^{-7})}{0.1} =$$

$$\frac{(0.01)(10^4)(10^{-12})}{10^{-6}} + 10^2 =$$

$$\frac{10^2 + 10^3}{10^3}$$

4. Go back and do problem 3 using your calculators. Do you get the same answers?