

ANSWERS IN BOLD/ITALICS

Scientific Notation Worksheet

In scientific notation, there is one digit, 1-9, to the left of the decimal and all other figures to the right of the decimal. This number is multiplied by the appropriate power of 10. If the non-exponential number is greater than one, the exponent must be positive and vice versa. If the non-exponential number is less than one, the exponent must be negative and vice versa.

1. Write the following numbers in scientific notation.

a. 21.45 **2.145×10^1**

f. 0.00000750 **7.5×10^{-6}**

b. 0.002 **2×10^{-3}**

g. 27 **2.7×10^{-1}**

c. 345000 **3.45×10^5**

h. 0.002973

d. 0.000345 **3.45×10^{-4}**

2.973×10^{-3}

e. 5,000,000,000 **5×10^9**

2. Write the following numbers in decimal (non-exponential) notation. Do NOT use your calculator for this!

a. 3×10^{-5} **.0003**

f. 2.98×10^2 **298**

b. 7.2×10^{-3} **.0072**

g. 2.980×10^{-2} **.02980**

c. 5.0×10^{-7} **.0000005**

h. 3.79×10^1

d. 9.1×10^6 **9,100,000**

37.9

e. 8.2×10^0 **8.2**

3. Calculate the following using your EE or EXP key on your calculator.

a. $(2.8 \times 10^3)(4.0 \times 10^{-6}) =$ **.0012**

b. $(8.3 \times 10^3)(4.1 \times 10^9) =$ **3.403×10^{13}**

c. $37.1 \times (2.6 \times 10^{-8}) =$ **9.646×10^{-7}**

d. $(7.52 \times 10^{-9})(3.20 \times 10^4) =$ **2.4064×10^{-4}**

e. $\frac{2 \times 10^3}{4.0 \times 10^{-6}} =$ **5×10^8**

g. $\frac{37}{2.0 \times 10^{-8}} =$ **1.85×10^9**