

Scientific Notation Worksheet

Name _____

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 nonexponential number is greater than one, the exponent must be positive and vice versa. If the nonexponential number is less than one, the exponent must be negative and vice versa.

1. Write the following numbers in scientific notation.

a. 2.145×10

e. 5,000,000,000

b. 0.002

f. 0.00000750

c. 345000

g. 27

d. 0.000345

h. 0.002973

2. Write the following numbers in decimal (nonexponential) notation.

a. 3×10^{-5}

e. 8.2×10^0

b. 7.2×10^{-3}

f. 2.98×10^2

c. 5.0×10^{-7}

g. 2.980×10^{-2}

d. 9.1×10^6

h. 3.79×10^1

3. Calculate the following.

a. $(2 \times 10^3)(4.0 \times 10^{-6}) =$

b. $(8.0 \times 10^3)(4.0 \times 10^9) =$

c. $37 \times (2.0 \times 10^{-8}) =$

d. $(7.52 \times 10^{-9})(3.2 \times 10^4) =$

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

f. $\frac{8.0 \times 10^3}{4.0 \times 10^9} =$

g. $\frac{37}{2.0 \times 10^{-8}} =$

h. $\frac{7.52 \times 10^{-9}}{3.2 \times 10^4} =$

$$4. \quad \frac{(8 \times 10^{-4})(5 \times 10^6)}{8 \times 10^{-7}} =$$

$$5. \quad \frac{(5.8 \times 10^{-7})(2 \times 10^4)}{4 \times 10^{-6}} =$$

$$6. \quad \frac{(8.4 \times 10^{-7})(9 \times 10^6)}{8 \times 10^6} =$$

$$7. \quad \frac{(5 \times 10^{-4})(7 \times 10^{-6})}{4 \times 10^5} =$$

$$8. \quad \frac{(8.7 \times 10^{-6})}{(3 \times 10^{-4})(6 \times 10^4)} =$$

$$9. \quad \frac{(6.2 \times 10^{-6})(9 \times 10^4)}{(8.6 \times 10^5)(7 \times 10^{-5})} =$$

$$10. \quad \frac{(7 \times 10^4)(6 \times 10^{-7})}{(5 \times 10^{-7})(8 \times 10^6)} =$$