

Remember the basic rules:

- 1) When converting into scientific notation and number is greater than 1, move the decimal to the **left OR right**.
- 2) When converting into scientific notation and number is less than 1, move the decimal to the **left OR right**.

Write the number in scientific notation.

- 3) 8.5 4) 72,000,000 5) 0.000000526 6) 0.000045 7) 900,000,000,000,000

Write the number in standard notation.

- 8) 7.5×10^7 9) 6.1×10^{-3} 10) 4.709×10^6 11) 1.544×10^{10} 12) 8.52×10^{-8}

Evaluate expressions. Write answer in scientific notation.

13) $(4.4 \times 10^3)(1.5 \times 10^{-7})$ 14) $(8.1 \times 10^{-4})(9 \times 10^{-6})$ 15) $(7.3 \times 10^{-5})(5.8 \times 10^2)$

16) $\frac{6 \times 10^{-3}}{8 \times 10^{-6}}$

17) $\frac{5.4 \times 10^{-5}}{1.8 \times 10^{-2}}$

18) $\frac{4.1 \times 10^{-3}}{8 \times 10^{-6}}$

19) $(5 \times 10^{-8})^3$

20) $(7 \times 10^{-5})^4$

21) $(1.4 \times 10^3)^2 (2 \times 10^5)$

22)

ERROR ANALYSIS Describe and correct the error in writing 1.24×10^{-3} in standard form.

$$1.24 \times 10^{-3} = 1240$$



23)

Jupiter has an equatorial diameter of about 8.9×10^4 miles, which is about 11.2 times as great as Earth's equatorial diameter. According to this information, what is Earth's approximate equatorial diameter in scientific notation?

F 2.3×10^3 mi

G 9.97×10^5 mi

H 7.95×10^3 mi

J 2.01×10^2 mi