

OPERATIONS WITH SCIENTIFIC NOTATION

Multiplying and Dividing

WHEN MULTIPLYING WITH SCIENTIFIC NOTATION:

Step 1: Multiply the coefficients

Step 2: Keep the base 10

Step 3: Add the exponents (same as with exponent rules)

Example:

$$(2.8 \times 10^8)(1.9 \times 10^4)$$
$$\underline{2.8 \times 1.9} \times 10^{8+4}$$
$$5.32 \times 10^{12}$$

WHEN DIVIDING WITH SCIENTIFIC NOTATION:

Step 1: Divide the coefficients

Step 2: Keep the base 10

Step 3: Subtract the exponents (same as with exponent rules)

Example:

$$\frac{6.4 \times 10^{-4}}{4 \times 10^6} = \frac{6.4}{4} \times 10^{-4-6}$$
$$= 1.6 \times 10^{-10}$$



Sometimes your answer is not in Scientific Notation because the coefficient is not greater than or equal to one and less than 10. The easiest way to fix it is to write it back in standard form and then follow the directions for putting it in correct scientific notation.