

Scientific Notation

Express each of the following numbers in scientific notation.

- 230 2.30×10^2
- 5601 5.601×10^3
- 14100000 1.41×10^7
- 56 million 5.6×10^7
- 0.45013 4.5013×10^{-1}
- 0.089 8.9×10^{-2}
- 0.0026 2.6×10^{-3}
- 0.000000698 6.98×10^{-7}

Express each of the following measurements in scientific notation.

- speed of light in a vacuum, 299,792,458 m/s $3.0 \times 10^8 \text{ m/s}$
- number of seconds in a day, 86,400 s $8.64 \times 10^4 \text{ s}$
- mean radius of Earth, 6378 km $6.378 \times 10^3 \text{ km}$
- density of oxygen gas at STP, 0.00142 g/mL $1.42 \times 10^{-3} \text{ g/mL}$
- radius of an argon atom, 0.000000000098 m $9.8 \times 10^{-11} \text{ m}$

Convert the following to scientific notation.

- 0.005 5.0×10^{-3}
- 5,050 5.05×10^3
- 0.0008 8.0×10^{-4}
- 1,000 1.0×10^3
- 1,000,000 1.0×10^6
- 0.25 2.5×10^{-1}
- 0.025 2.5×10^{-2}
- 0.0025 2.5×10^{-3}
- 500 5.0×10^2
- 5,000 5.0×10^3