

Chapter 1

Quantities and Units

Section 1-2 Scientific Notation

1. (a) $3000 = 3 \times 10^3$ (b) $75,000 = 7.5 \times 10^4$ (c) $2,000,000 = 2 \times 10^6$
2. (a) $\frac{1}{500} = 0.002 = 2 \times 10^{-3}$
 (b) $\frac{1}{2000} = 0.0005 = 5 \times 10^{-4}$
 (c) $\frac{1}{5,000,000} = 0.0000002 = 2 \times 10^{-7}$
3. (a) $8400 = 8.4 \times 10^3$ (b) $99,000 = 9.9 \times 10^4$ (c) $0.2 \times 10^6 = 2 \times 10^5$
4. (a) $0.0002 = 2 \times 10^{-4}$ (b) $0.6 = 6 \times 10^{-1}$
 (c) 7.8×10^{-2} (already in scientific notation)
5. (a) $32 \times 10^3 = 3.2 \times 10^4$
 (b) $6800 \times 10^{-6} = 6.8 \times 10^{-3}$
 (c) $870 \times 10^8 = 8.7 \times 10^{10}$
6. (a) $2 \times 10^5 = 200,000$
 (b) $5.4 \times 10^{-9} = 0.0000000054$
 (c) $1.0 \times 10^1 = 10$
7. (a) $2.5 \times 10^{-6} = 0.0000025$ (b) $5.0 \times 10^2 = 500$ (c) $3.9 \times 10^{-1} = 0.39$
8. (a) $4.5 \times 10^{-6} = 0.0000045$
 (b) $8 \times 10^{-9} = 0.000000008$
 (c) $4.0 \times 10^{-12} = 0.0000000000040$