1. Describe the relationship between fundamental units and derived units.
2. Which of the following is a more preceise measurement, the length of a car measured to the nearest meter or measured to the nearest millimeter? Explain your answer.
3. Explain the difference between accuracy and precision.
4. State the number of significant digits in each of the following measurements.
   a) 3809 m b) 9.013 m c) 0.0045 m
5. Which of the following measurements contains zeros that are not significant? Explain your answer.
   a) 3.050×10.5 b) 0.0053 m c) 45.020 cm d) 101.20 g
6. Express the following measurements in scientific notation.
   a) 142 000 s b) 0.008 09 kg c) 501 000 000 m
7. Solve the following problems. Express your answers in scientific notation using the correct number of significant digits.
   a) $(2 \times 10^6 \text{ m})(5 \times 10^5 \text{ m})$ b) $(12 \times 10^6 \text{ m}) \div (4 \times 10^2 \text{ s})$ c) $(5.06 \times 10^2 \text{ m}) + (8.124 \text{ km})$
8. The total mass of four containers is 5.000 kg. If the mass of Container A = 256 mg, Container B is 5117 cg, and Container C is 382 g, what is the mass of Container D?
9. Perform the following conversions:
   a) 30.0 km/h = _____ m/s b) 0.31 g/cm^3 = _____ kg/m^3 c) 27.8 m/s = _____ km/h
10. Make the following conversions:
    a) 4800 cm^3 = _____ m^3 b) 265 mm^2 = _____ m^2 c) 0.052 m^2 = _____ cm^2
11. A physics class measures the frequency of a recording timer and obtains the following data:

frequency (Hz)	56.2	59.6	61.1	57.8	62.0

    a) What is the most probable value for the recording timer?
    b) The accepted value is 60.0 Hz. What is the percentage error of the class results?