Problem Set 1

1. Count the number of significant figures.

   a) 0.080200 kg __________________
   b) 5.080 \times 10^{-5} \text{ m} ____________

2. Report the answers using the correct number of significant figures.

   a) 6.256 + 1.54 = ________________________

   b) 7.0542 \times 32.00 \div 2.85 = ________________________

   c) (2.604 \times 2.81) \div (42.8 - 18.12) = ________________________

3. Complete the conversions.

   a) 0.0040 \text{ m} = ________________ \text{ mm}
   b) 1.67 \text{ hour} = ________________ \text{ s}

   c) 13.6 \text{ g/cm}^3 = ________________ \text{ kg/m}^3

4. The mass of a 5.22 \text{ cm}^3 of metal is 59.5 g. What is the density of the metal? What is the volume of the same type of metal with a mass 228.6 g?