

Problem Set 2: Presenting Chemical Data

- 1) For each of the following values identify the number of significant figures.
 - a) 5046 m
 - b) 67 000 kg
 - c) 67 050 cm
 - d) 0.0070800 kg
 - e) 2.0027 mm
 - f) 6 000 001 km
 - g) 345. 067 g

- 2) Write each of the following values in scientific notation.
 - a) 46.23
 - b) 0.052
 - c) 62 420 000
 - d) 0.000 007 243

- 3) Use scientific notation to represent each of the following measurements in SI base units.
 - a) 46 mL
 - b) 239 km
 - c) 5.6 ns
 - d) 51340 mA

- 4) Solve the following calculations and write each answer using the appropriate number of significant figures for each calculation.
 - a) 445.65 grams + 298 grams =
 - b) 45.2 grams / 2.2 mL =
 - c) 3.22×10^3 joules / 45 seconds =
 - d) 0.0020 meters – 0.21 meters =
 - e) 439 cm + 1.20 cm + 200 cm =
 - f) 560 meters / 125 seconds =
 - g) 398.02 kilograms + 24.152 kilograms =
 - h) 95 m/s x 32.211 s =

- 5) What is the volume of a space that measures 1.004 m long, 0.0025 m wide and 0.055 m high? Write your answer in scientific notation.