

**Show your work. Give your answers in scientific notation, with the correct number of significant figures and the correct units. Each question is worth 4 points. You have 15 min to complete this quiz. You may not use your cell phone as a calculator. Put a box around your final answer.**

1. What is the mass of a piece of aluminum foil that is 0.7 mm by 7.1 cm by 8.4 cm? The density of aluminum is 2.7 g/mL.
2. Aspirin has a density of 1.40 g/cm<sup>3</sup>. What is the mass of an aspirin tablet that has a volume of 2.56 x 10<sup>-1</sup> mL?
3. A rectangular room is 9 feet by 12 feet. How many square meters of carpet will completely cover this floor? (There are 2.54 cm in an inch.)
4. If the diameter of a Lithium atom is 3.00 x 10<sup>2</sup> pm. If these atoms were placed side by side on a ruler, how many lithium atoms in a row would be 1.5 cm long? (Lithium metal reacts violently with water, the form of lithium that is used to treat manic depression is the lithium ion, its diameter is about 120 pm.)
5. If someone weighs 155 lbs, what is their weight in kilograms? There are 2.206 lbs in a kg.