

CHEM 130
Quiz 1 -

Name _____
Due by 12:00 noon, Monday August 27.

1. One of the challenges that we all deal with at least to some extent is stress. It is important for each of us to have a means to minimize the impact of stress on our lives. What is your preferred release from stress? (6 points)

2. Recently, *Science* magazine published a periodic table with a haiku for each element. Go to this periodic table at the link below and find the element whose atomic number corresponds to your birthdate+20 (for example, I was born on December 6, so I would select element 26, which is iron. Write the haiku for that element and “decode” the haiku below. Searching for the element on Wikipedia may be a good place to start. (6 points)
<http://vis.sciencemag.org/chemhaiku/>

These are typical problems involving unit conversion, the metric system, percentage calculations, etc. You may use your book, **but you may not seek help from anyone other than Dr. Lamp**. As you work these problems remember to keep track of units and be sure that every answer has the correct units and significant figures. Clearly mark your answers.

Percent (%) = (parts component)/(100 parts sample) e.g. % by mass = (g component)/(100g sample)
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3. The karat is a measure of the purity of gold, with 24 karat gold referring to pure gold. Much gold jewelry is 14 karat, which is 58.3% gold by mass in an alloy with elements like copper, zinc and nickel added to increase durability. If you have a 14 karat gold ring with a mass of 22.5 grams, and the value of pure gold is \$38.14 per gram, what is the value of the gold in the ring? (6 points)

Answer _____

4. A typical drop of water has a volume of about 0.050 mL. If the density of water is 1.00 grams per mL and 6.02×10^{23} molecules have a mass of 18.0 grams, how many water molecules are in a drop of water? (7 points)

Answer _____