

Chemistry 105-Fundamental Chemistry
Quiz 1A-Wednesday, 23 September 1998

Name _____
Laboratory Section _____

Answer in the space provided. Show work whenever possible. Use the factor label method whenever possible. If you have a question raise your hand. If you finish early you may leave but do so quietly without disturbing others around you. Use a pen. Good luck.

1) (5 pts) Explain how and why each and every measurement gives a numerical result that has three aspects.

2) (5 pts) For each of the names given below, print the appropriate chemical formula in the blank to the right of the name.

barium carbonate	_____
silicon dioxide	_____
iron (II) cyanide	_____
carbon tetrachloride	_____
cesium fluoride	_____

Compute the numerical answer for questions 3-5 below. Make sure you give your answer with the correct number of significant figures and the proper abbreviation for units and feel free to use scientific notation if you need to. Show your work.

3) (5pts) $(6.531 \times 10^{13})(6.02 \times 10^{23}) \div [(435)+(2.0000)] =$

4) (5pts) Common table sugar has a density of 1.587g/cm^3 . What would be the volume of 10.00 pounds (as **measured** on a balance) of sugar in liters? (1 pound = 453.6 g = 16 ounces)

5) (5pts) In Germany if you travel by car you most likely will drive on the Autobahn. The Autobahn is a superhighway with no posted speed limit. Therefore, I cannot ask a question about how fast you would be going! However, if you were out driving and saw a sign which said that salmon cost 37.30 Marks (the German unit of currency) per kilogram, what would the cost be in American dollars per pound (lb)? (Remember, 4 qts = 1 gal, 1.057 qts = 1L, 4.184 J = 1 cal, 2.54 cm = 1 in, 2000 lbs = 1 ton, 1 lb = 453.6 g, 5280 ft = 1 mile, 12 = dozen, 101.325 kps = 1 atm, and the exchange rate is 1.478 German marks = 1 dollar.)