

CHEM 130
Quiz 3

Name _____

Due by 5:00 PM, Friday September 8.

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.

1. Two elements, R and Q combine to form two binary compounds. In the first compound, 14.0g R combines with 3.00g of Q. In the second compound, 7.00g of R combines with 4.50g of Q.
 - a. Show whether these data are in agreement with the law of multiple proportions. (4 pts.)

- b. If the formula for the second compound is RQ, what is the formula for the first compound? (4 pts)

2. Complete the following table: (8 pts)

Symbol	# protons	# neutrons	# electrons	net charge
${}^{238}_{92}\text{U}$				
	20	20		+2
	23	28	20	+3
${}^{89}_{39}\text{Y}$				
	34	44	36	
	15	16		-3

3. The two naturally occurring isotopes of copper have masses of 62.9296 amu and 64.9278 amu. Determine the percentage of copper-65 (^{65}Cu) in naturally occurring copper (8 pts)