Quiz 5

Name:_____

1. A 15.0 g sample of a compound contains 6.0 g of carbon. What is the percent composition of carbon in the compound?

2. 3.43 % of the sample is composed of nitrogen. If the mass of the nitrogen is 15.6 g, what is the total mass of the sample?

3. How many CO_2 molecules are in 0.000534 g of CO_2?

4. How many grams are equivalent to 3.40×10^{36} atoms of iron (Fe)?

5. A compound is found to be composed of 40.454% carbon, 5.658% hydrogen, and 53.888% oxygen by mass. The experimental molar mass of the compound is 267.21 g/mol. Determine the empirical and molecular formula of the compound.

1	1 **H** 1.008	**IIA**											**IIIA**	**IVA**	**VA**	**VIA**	**VIIA**	2 **He** 4.003
2	3 **Li** 6.941	4 **Be** 9.012											5 **B** 10.91	6 **C** 12.01	7 **N** 14.01	8 **O** 16.00	9 **F** 19.00	10 **Ne** 20.18
3	11 **Na** 23.00	12 **Mg** 24.31											13 **Al** 26.98	14 **Si** 28.09	15 **P** 30.97	16 **S** 32.06	17 **Cl** 35.45	18 **Ar** 39.95
4	19 **K** 39.10	20 **Ca** 40.08	21 **Sc** 44.96	22 **Ti** 47.90	23 **V** 50.94	24 **Cr** 52.00	25 **Mn** 54.94	26 **Fe** 55.85	27 **Co** 58.93	28 **Ni** 58.71	29 **Cu** 63.55	30 **Zn** 65.37	31 **Ga** 69.72	32 **Ge** 72.59	33 **As** 74.92	34 **Se** 78.96	35 **Br** 79.90	36 **Kr** 83.80
5	37 **Rb** 85.47	38 **Sr** 87.62	39 **Y** 88.91	40 **Zr** 91.22	41 **Nb** 92.91	42 **Mo** 95.94	43 **Tc** (99)	44 **Ru** 101.0	45 **Rh** 102.9	46 **Pd** 106.4	47 **Ag** 107.9	48 **Cd** 112.4	49 **In** 114.8	50 **Sn** 118.7	51 **Sb** 121.8	52 **Te** 127.6	53 **I** 126.9	54 **Xe** 131.3
6	55 **Cs** 132.9	56 **Ba** 137.3	57 **La*** 138.9	72 **Hf** 178.9	73 **Ta** 180.9	74 W 183.9	75 **Re** 186.2	**76** Os 190.2	77 **Ir** 192.2	78 **Pt** 195.1	79 **Au** 197.0	80 **Hg** 200.6	81 **Tl** 204.4	82 **Pb** 207.2	83 **Bi** 209.0	84 **Po** (210)	85 **At** (210)	86 **Rn** (222)
7	87 **Fr** (223)	88 **Ra** (226)	89 **Ac*** (227)															