Chemistry 115 Name

Dr. Cary Willard

Quiz 5A (20 points) March 9, 2009

All work must be shown to receive credit. Avogadro’s number 6.022 x 1023/mol

1. (3 points) Calculate the number of moles of phosphorous that contain 3.54 x 1021 atoms of phosphorous
2. (3 points) Calculate the mass of 6.53 moles of titanium.
3. (3 points) Calculate the number of atoms of boron in 3.00 g of boron.
4. (3 points) Calculate the molar mass of calcium carbonate, (CaCO3)
5. (3 points) Calculate the number of atoms of carbon in 3.50 mol of calcium carbonate.
6. (5 points) Determine the empirical formula of a compound that is composed of 69.9% iron and 30.1% oxygen.

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1. (3 points) Calculate the number of moles of phosphorous that contain 6.03 x 1021 atoms of phosphorous
2. (3 points) Calculate the mass of 2.84 moles of titanium.
3. (3 points) Calculate the number of atoms of boron in 5.00 g of boron.
4. (3 points) Calculate the molar mass of calcium carbonate, (CaCO3)
5. (3 points) Calculate the number of atoms of carbon in 7.93 mol of calcium carbonate.
6. (5 points) Determine the empirical formula of a compound that is composed of 72.4% iron and 27.6% oxygen.