Chemistry 115 Name

Dr. Cary Willard

Quiz 4a (20 points) February 25, 2010

Must show all work to receive credit. Use proper significant figures.

Avogadro’s number – 6.022 x 1023 particles/mol

1. (4 points) How many atoms of copper are in a 0.423 mol sample of copper?
2. (4 points) A piece of zirconium contains 5.25 x 1025 atoms. How many moles of zirconium are there in the sample?
3. (4 points) What is the mass of a 2.18 mol sample of sulfur in grams?
4. (4 points) How many atoms of silicon are there in a 3.00 g sample of silicon?
5. (4 points) What is the molar mass of aluminum nitrate, Al(NO3)3?

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Quiz 4b (20 points) February 25, 2010

Must show all work to receive credit. Use proper significant figures.

Avogadro’s number – 6.022 x 1023 particles/mol

1. (4 points) How many atoms of copper are in a 0.657 mol sample of copper?
2. (4 points) A piece of zirconium contains 3.93 x 1025 atoms. How many moles of zirconium are there in the sample?
3. (4 points) What is the mass of a 4.26 mol sample of sulfur in grams?
4. (4 points) How many atoms of silicon are there in a 4.00 g sample of silicon?
5. (4 points) What is the molar mass of ferric nitrate, Fe(NO3)3?