Name _____ Period _____ Date _____
Pre AP Chemistry

Chapter 3 Review—Worksheet #3

Answers to calculations:

III. Average atomic mass

3. Calculate the average atomic mass for carbon using the following information.

Isotope	Percent abundance	Atomic mass
Carbon-12	98.90%	12 amu
Carbon-13	1.10%	13.003355 amu

12.011 amu

V. Mole conversions

1. What is the mass in milligrams of 0.015 moles of silver? 1600 mg

2. How many moles oxygen gas will occupy 0.025 m^3 of space at STP? 1.1 mol

3. How many atoms of copper are in 15.0 decigrams of copper wire? 1.42×10^{22} atoms

4. How many liters of space will 30.0 grams of neon gas occupy at STP? 33.3 L

5. How many cm^3 of space will 1.50×10^{21} atoms of helium occupy at STP? 55.8 cm^3

VI. Other conversions

1. A cheetah can run 112 km/hr. What is this speed in dekameters per minute?
187 Dm/min

2. How many micrograms of gold will occupy 2.0 mm^3 of space if the density is 19.3 g/cm^3?
39000 µg

3. Convert 560 nm to meters. 5.6×10^{-7} m

4. How many seconds will it take to cover 75.0 meters if your running 20.0 hm/min?
2.25 s

5. If your faucet drips at a rate of 5 drops per minute, then how many liters of water will you waste in 1.50 years? (Assume 20 drops = 1 mL and 1 year = 365 days)
197 L