Name _____ Date _____ Class _____

REVIEW

3 SECTION 3.4

Using Moles to Count Atoms

1. **Define** a *mole.*

2. **Identify** which of the following statements are correct:

   _____ **a.** 1 mol of titanium, Ti, is 47.88 g

   _____ **b.** 1 mol of strontium, Sr, is 40.08 g

   _____ **c.** 2 mol of carbon, C, are 24.02 g

   _____ **d.** 1 mol of mercury, Hg, is 200.6 g

3. **Explain** why the mole is used as a counting unit for atoms.

4. **Determine** the molar mass of each of the following elements:

   _____ **a.** calcium, Ca

   _____ **b.** cobalt, Co

   _____ **c.** sulfur, S

   _____ **d.** oxygen, O

5. **Outline** the steps required to find the mass in grams of an element from a given amount of the element in moles.

6. **Determine** the mass in grams of each of the following:

   _____ **a.** 0.60 mol of neon, Ne

   _____ **b.** 5.01 mol of xenon, Xe

   _____ **c.** 1.9 mol of selenium, Se

   _____ **d.** 3.3 mol of gold, Au

7. **Determine** the amount in moles of each of the following:

   _____ **a.** 0.35 g of hydrogen, H

   _____ **b.** 405 g of boron, B

   _____ **c.** 26 g of chromium, Cr

   _____ **d.** 8.5 g of sulfur, S