Practice 3.4 Name _____

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