Worksheet: Stoichiometry Problems With a Twist **Name_____**

1. When mercury (II) oxide is heated, it decomposes into mercury and oxygen gas according to the following BALANCED equation.

$$2\ HgO \rightarrow 2\ Hg + O_2$$

   a. Given that the density of oxygen is 1.439 g/L, how many liters of oxygen gas can be produced if 2.0 moles of mercury (II) oxide are heated?

   b. How many molecules of oxygen gas are produced if 25.0 g of mercury (II) oxide are heated?

2. How many molecules of sodium nitrate are produced when 20.0 g of sodium azide, NaN_3, react according to the following BALANCED equation?

$$NaN_3 + AgNO_3 \rightarrow AgN_3 + NaNO_3$$