Stoichiometry Worksheet 2: Percent Yield

For each of the problems below:

- a. Write the balanced chemical equation.
- b. Identify the given (with units) and what you want to find (with units).
- c. Show set up with units. Give final answer with units and label.
- 1. Using the Hoffman apparatus for electrolysis, a chemist decomposes 36 g of water into its gaseous elements. How many grams of hydrogen gas should she get (theoretical yield)?

Before
$$2 H_2 O \rightarrow 2 H_2 + O_2$$

Before $1.99 \text{ mol} \rightarrow 1.99 \text{ mol} \rightarrow 1.00 \text{ mol}$

Change $-2.99 \text{ mol} \rightarrow 1.00 \text{ mol}$

After $0 \text{ mol} \rightarrow 2.00 \text{ mol}$
 $1.00 \text{ mol} \rightarrow 2.00 \text{ mol$

2. Recall that liquid sodium reacts with chlorine gas to produce sodium chloride. You want to produce 581 g of sodium chloride. How many grams of sodium are needed?

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AW Rasmussen

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