Using Stoichiometry Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Methane and sulfur react to produce carbon disulfide (CS2), a liquid often used in the production of cellophane.

\_\_\_\_CH4 + \_\_\_\_S8 → \_\_\_\_CS2 + \_\_\_\_H2S

1. Balance the equation
2. Calculate the moles of CS2 produced when 1.50 mol S8 is used.
3. How many moles of H2S is produced?

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| 1. Sodium chloride is decomposed into the elements sodium and chlorine by means of electrical energy. How much chlorine gas in grams is obtained from the reaction diagramed to the right? **(remember to balance the equation)** |  |

1. One of the reactions used to inflate automobile air bags involves sodium azide (NaN3):

2NaN3 → 2Na + 3N2

How many grams of N2 is produced if 100.0 g of 2NaN3 decomposes?