

# CHEMISTRY HOMEWORK SHEET

NAME \_\_\_\_\_

16	32
<b>S</b>	16 S <sup>-2</sup>
32.065	16 protons 18 electrons 16 neutrons



Write a balanced equation for each reaction. Solve the problems, showing all work and units.

1. How many moles of oxygen would be required to completely burn 21.4 grams of butane (C<sub>4</sub>H<sub>10</sub>)?

2. How many moles of sodium chloride is produced when chlorine reacts with 0.214 grams of sodium iodide? (*single-replacement reaction*)

3. Determine the mass of carbon monoxide produced when 21.40 moles of antimony (III) oxide reacts with carbon to produce antimony (Sb) and carbon monoxide.

4. Sulfuric acid reacts with zinc metal to produce hydrogen gas and zinc sulfate. How many grams of hydrogen gas are produced by 2.14 moles of sulfuric acid?

5. Determine the number of moles of ethyne (C<sub>2</sub>H<sub>2</sub>) produced when calcium carbide (CaC<sub>2</sub>) reacts with 214 grams of water to form calcium hydroxide and ethyne.