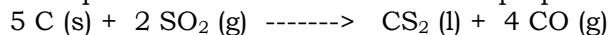


**Mole - Mole Conversions**

Name: \_\_\_\_\_

Complete the following mole to mole conversions. Show Work:

1) Carbon disulfide (CS<sub>2</sub>) is an important industrial solvent. It is prepared by the following reaction:

a) How many moles of carbon disulfide form when 2.7 mol of C react?

b) How many moles of carbon are needed to react with 5.44 mol of SO<sub>2</sub>?c) How many moles of CO form at the same time that 0.246 mol of CS<sub>2</sub> forms?d) How many moles of sulfur dioxide are required to make 118 mol of CS<sub>2</sub>?

2) How many moles of HCl can be produced from 6.0 moles of chlorine reacting with hydrogen?

Balanced Equation:

3) Calculate the moles of water that can be produced when 0.35 moles of hydrogen burn in the presence of oxygen.

Balanced Equation:

4) How many moles of chlorine gas will be required to react with iron to produce 14 moles of iron (III) chloride?

Balanced Equation:

Answers: 1a) 0.54 mol CS<sub>2</sub>    1d) 236 mol SO<sub>2</sub>    2) 12 mol HCl    4) 21 mol Cl<sub>2</sub>