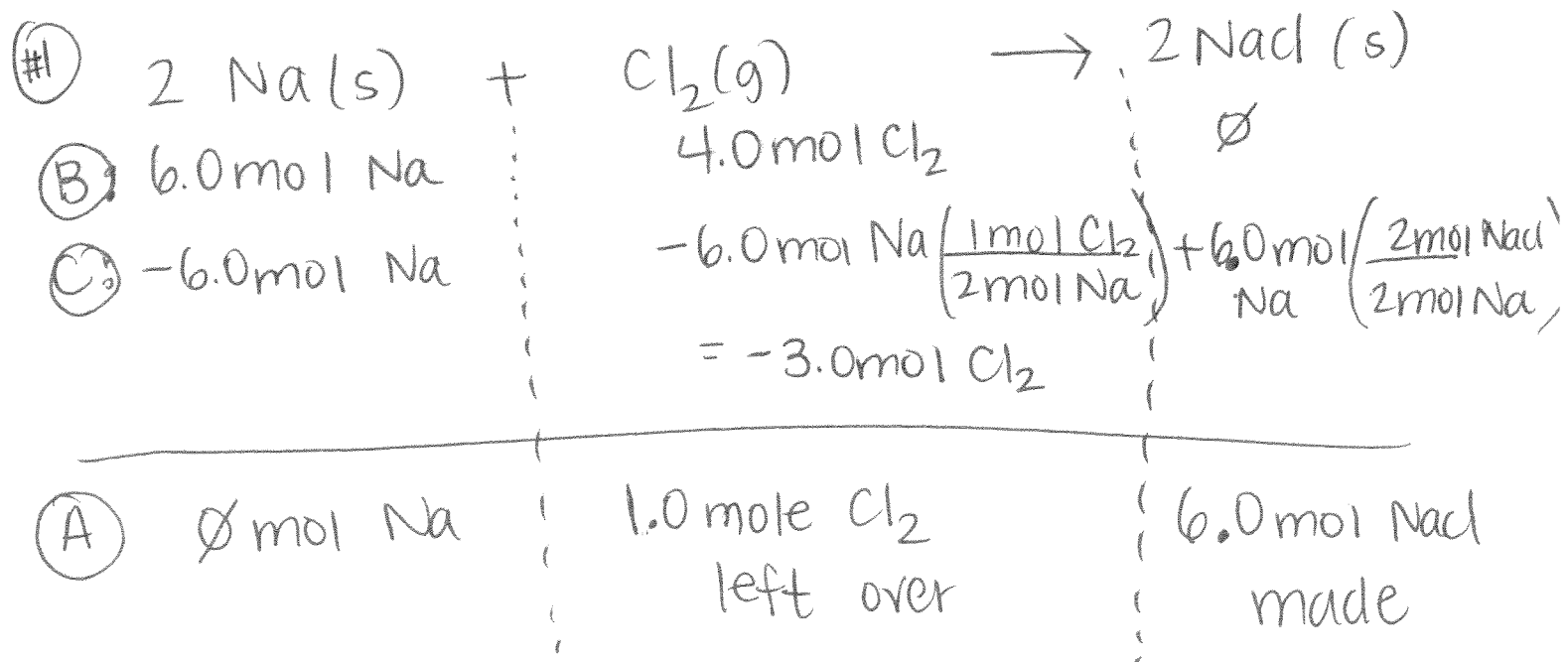


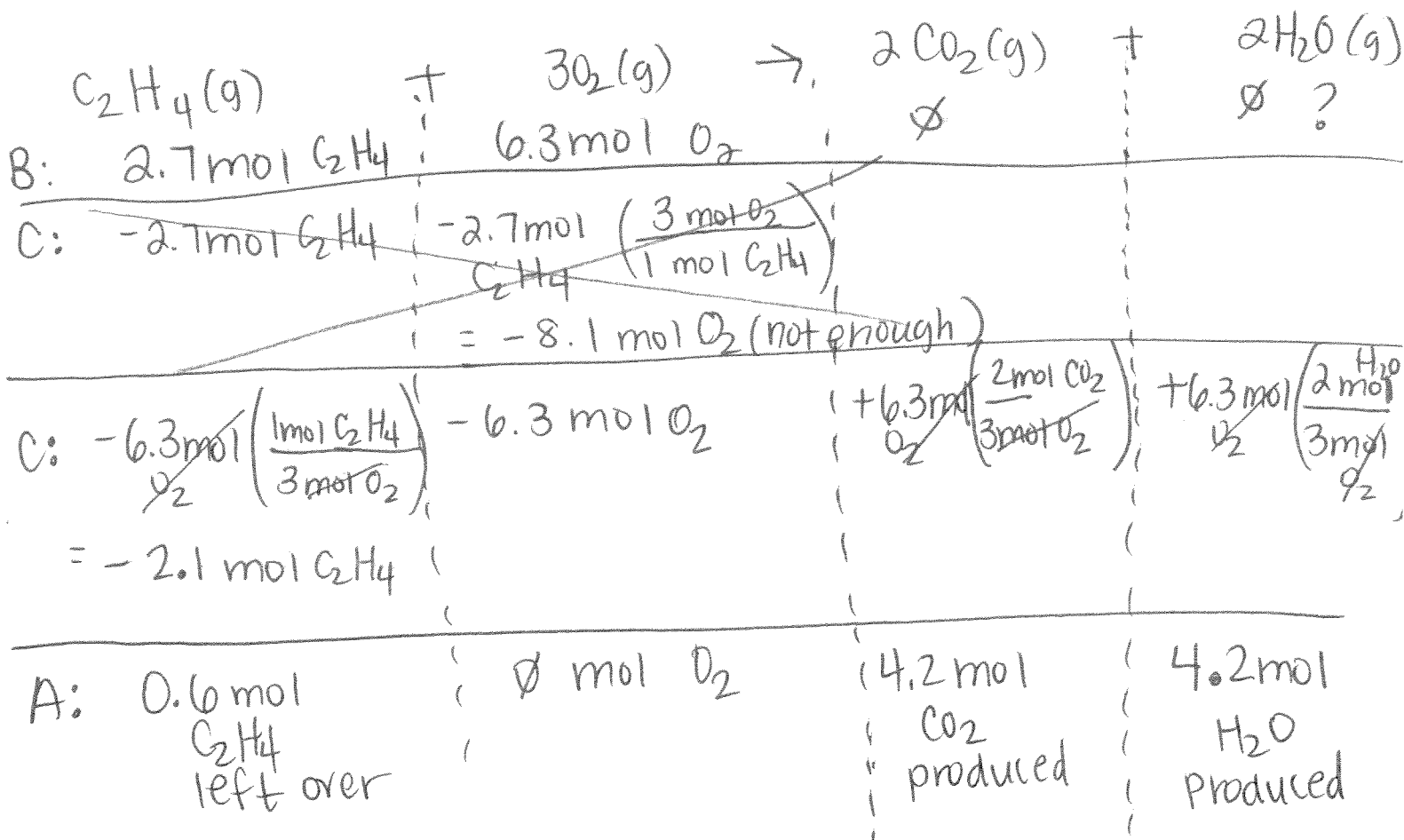
## Limit Reactant Practice



- a. 6.0 mole NaCl produced
- b. Na is the limiting reactant
- c. 1.0 mole of  $\text{Cl}_2$  left over / in excess  
( $\text{Cl}_2$  is the excess reactant)

# Limiting Reactant Practice Pg 2

#2



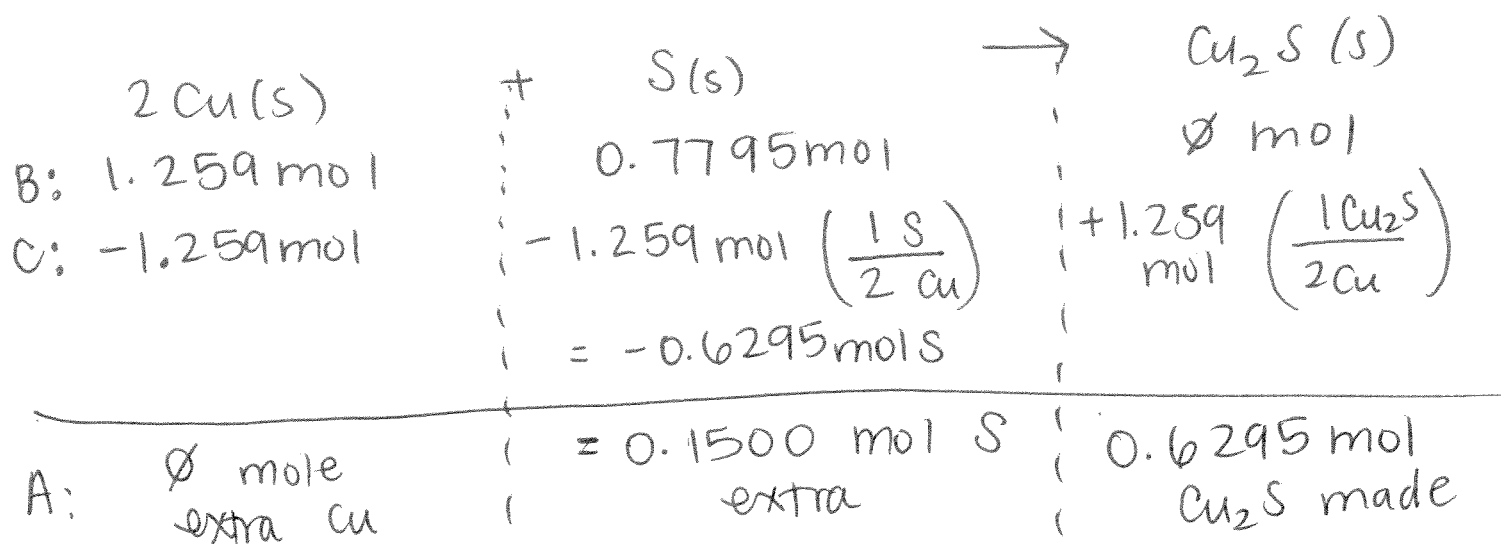
- a) 4.2 mol  $H_2O$  made
- b)  $O_2$  is the limiting reactant
- c)  $C_2H_4$  is the excess reactant  
w/ 0.6 mol left over

## Limiting Reactant Practice pg 3

- #3 \* the values given in the question are not in moles  
∴ must convert to moles before putting values in B-C-A table.

$$\frac{80.00 \text{ g Cu}}{63.55 \text{ g Cu}} \left| \frac{1 \text{ mole Cu}}{63.55 \text{ g Cu}} \right. = 1.259 \text{ mol Cu}$$

$$\frac{25.00 \text{ g S}}{32.07 \text{ g S}} \left| \frac{1 \text{ mole S}}{32.07 \text{ g S}} \right. = 0.7795 \text{ mol S}$$



$$\text{a) } \frac{0.6295 \text{ mol Cu}_2\text{S}}{1 \text{ mol Cu}_2\text{S}} \left| \frac{159.17 \text{ g Cu}_2\text{S}}{1 \text{ mol Cu}_2\text{S}} \right. = \boxed{100.2 \text{ g Cu}_2\text{S}}$$

b) Cu is the limiting reactant

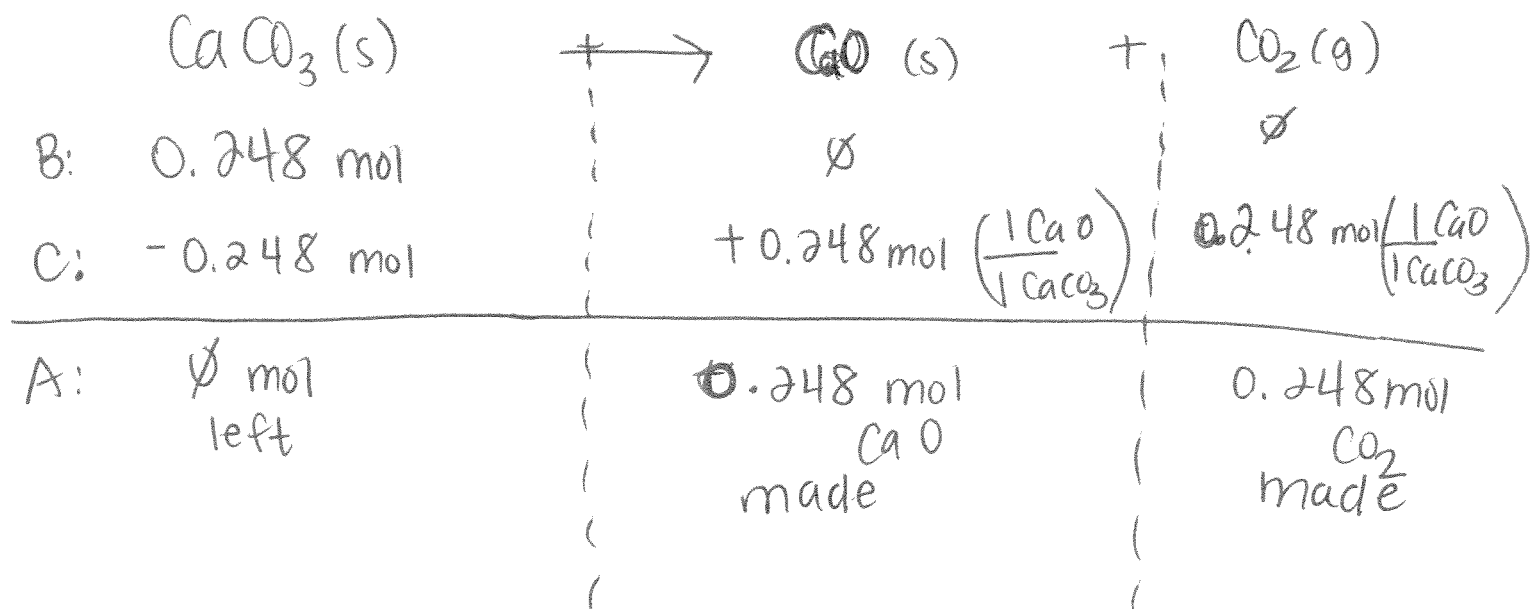
c) S is the excess reactant

$$\text{d) } \frac{0.1500 \text{ mol S}}{1 \text{ mol}} \left| \frac{32.07 \text{ g S}}{1 \text{ mol}} \right. = \boxed{4.811 \text{ g S excess}}$$

# Limiting Reactant Practice pg 4

#8

$$\frac{24.8 \text{ g CaCO}_3}{100.09 \text{ g CaCO}_3} \times \frac{1 \text{ mole CaCO}_3}{100.09 \text{ g CaCO}_3} = 0.248 \text{ mol CaCO}_3$$



a) 
$$\frac{0.248 \text{ mol CaO}}{1 \text{ mol CaO}} \times 56.08 \text{ g CaO} = \boxed{13.9 \text{ g CaO}}$$

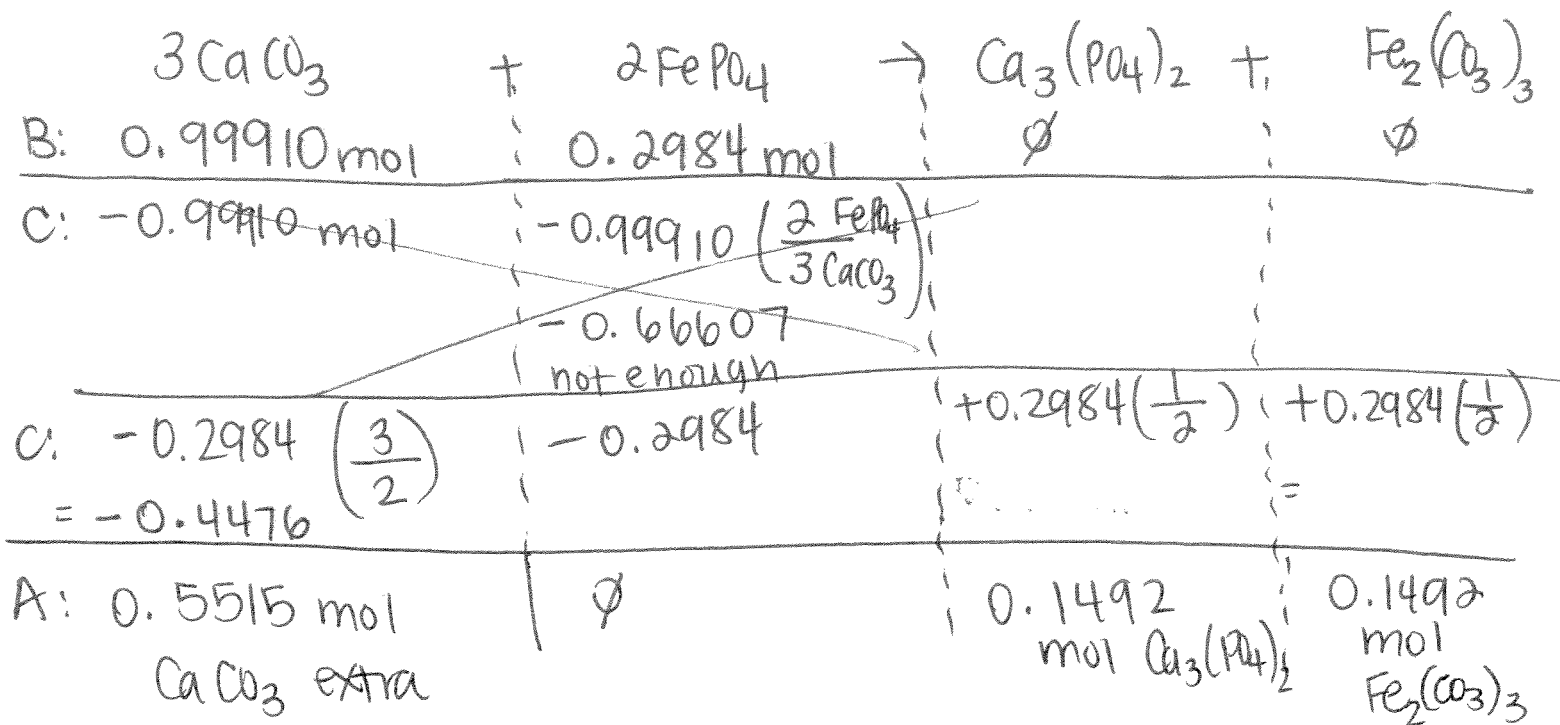
b) 
$$\frac{0.248 \text{ mol CO}_2}{1 \text{ mol CO}_2} \times 22.4 \text{ L CO}_2 = \boxed{5.56 \text{ L CO}_2}$$

# Limiting Reactant Practice pg 5

#5 Step 1 Convert g to moles.

$$\frac{100.00 \text{ g CaCO}_3}{100.09 \text{ g CaCO}_3} \left| \frac{1 \text{ mole CaCO}_3}{100.09 \text{ g CaCO}_3} \right. = 0.99910 \text{ mol CaCO}_3$$

$$\frac{45.00 \text{ g FePO}_4}{150.82 \text{ g FePO}_4} \left| \frac{1 \text{ mol FePO}_4}{150.82 \text{ g FePO}_4} \right. = 0.2984 \text{ mol FePO}_4$$



$$\frac{0.1492 \text{ mol Fe}_2(\text{CO}_3)_3}{1 \text{ mol Fe}_2(\text{CO}_3)_3} \left| \frac{291.73 \text{ g Fe}_2(\text{CO}_3)_3}{1 \text{ mol Fe}_2(\text{CO}_3)_3} \right. = 43.53 \text{ g Fe}_2(\text{CO}_3)_3$$