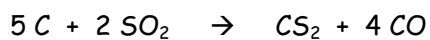


## Limiting Reagent

Name - \_\_\_\_\_

1a.) What mass of  $CS_2$  is produced when 17.5 g of C are reacted with 39.5 g of  $SO_2$  according to the equation?



b.) What mass of the excess reactant will be left over?

2a.) What mass of NO is produced when 87.0 g of Cu are reacted with 225 g of  $HNO_3$ ?

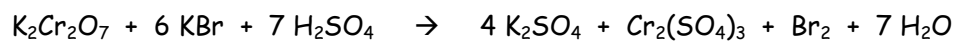
The reaction is as follows.  $3 Cu + 8 HNO_3 \rightarrow 3 Cu(NO_3)_2 + 2 NO + 4 H_2O$

b.) What mass of the excess reactant will be left over?

3a.) What mass of  $P_4$  is produced when 41.5 g of  $Ca_3(PO_4)_2$ , 26.5 g of  $SiO_2$  and 7.80 g of  $C$  are reacted according to the following equation.  $2 Ca_3(PO_4)_2 + 6 SiO_2 + 10 C \rightarrow P_4 + 6 CaSiO_3 + 10 CO$

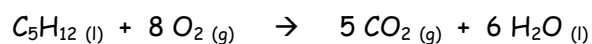
b.) How many grams of each excess reactant will remain unreacted?

4a.) What mass of  $Br_2$  is produced when 25.0 g of  $K_2Cr_2O_7$ , 55.0 g of  $KBr$  and 60.0 g of  $H_2SO_4$  are reacted.



b.) How many grams of each excess reactant will remain unreacted?

5.) What volume of  $\text{CO}_2$  (g) at STP can be made when 0.0250 L of  $\text{C}_5\text{H}_{12}$  (l) (density =  $\frac{626.0 \text{ g}}{\text{L}}$ ), is reacted with 40.0 L of  $\text{O}_2$  (g) at STP in the following equation.



6.) If 50.0 mL of 0.100 M HCl is allowed to react with 30.0 mL of 0.200 M NaOH, which is the reactant in excess?

7.) If 0.250 g of  $\text{Ba}(\text{OH})_2$  is mixed with 15.0 mL of 0.125 M HBr, what mass of  $\text{BaBr}_2$  can be formed?