Name: _____

Block: _____

# Stoichiometry #1

1. How much of each product would be made when 4.0 mol of $Pb(NO_3)_2$ decomposes in the reaction: $2\,Pb(NO_3)_2 \longrightarrow 2\,PbO + 4\,NO_2 + O_2$

2. How much of each product would be made when 1.33 mol of Ca_3P_2 reacts with excess water in the double replacement reaction: $Ca_3P_2 + 6\,H_2O \longrightarrow 3\,Ca(OH)_2 + 2\,PH_3$

3. How much $AlCl_3$ would you need to completely react with 1.5 mol Ca in the single replacement reaction: $3\,Ca + 2\,AlCl_3 \longrightarrow 3\,CaCl_2 + 2\,Al$

4. How much of each product would be made when 1.50 mol H_3PO_3 decomposes in the reaction: $4\,H_3PO_3 \longrightarrow 3\,H_3PO_4 + PH_3$

5. How many moles of KCl would be produced from 0.175 mol of K and excess Cl_2 in the reaction: $2\,K + Cl_2 \longrightarrow 2\,KCl$

6. How many moles of Na_2O would be required to produce 0.275 mol of NaOH in the reaction:
$Na_2O + H_2O \longrightarrow 2\,NaOH$
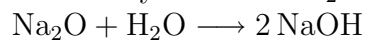
7. 8.75 mol of $NaClO_3$ will produce how many moles of O_2 in the reaction:
$2\,NaClO_3 \longrightarrow 2\,NaCl + 3\,O_2$
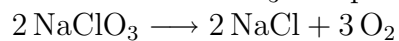
8. How many moles of NaCl are produced in the following reaction when $44.8\,\ell$ of O_2 are produced at S.T.P. in the reaction: $2\,NaClO_3 \longrightarrow 2\,NaCl + 3\,O_2$

9. How many *grams* of magnesium are needed to completely react with 2.0 mol of O_2 in the reaction: $2\,Mg + O_2 \longrightarrow 2\,MgO + 1203.2\,kJ$