

Name _____

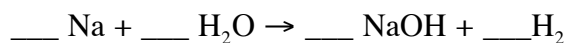
Period _____

**Chemistry Practice Test
Stoichiometry**

Form P

Part I: Solve each of the following problems. You must show work in order to receive credit. Use units and sig figs in your answers.

1) Consider the following single replacement reaction:



a) Balance the equation in the spaces provided.

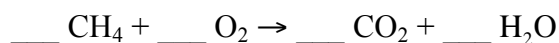
b) What is the ratio of moles of Na to moles of H₂O in the balanced equation?

c) What is the ratio of moles of Na to moles of H₂ in the balanced equation?

b) _____

c) _____

2) Consider the following combustion reaction:



a) Balance the equation in the spaces provided.

b) How many moles of O₂ are needed to react with 2.50 moles of CH₄?

c) How many moles of O₂ are needed to react with 5 moles of CH₄?

b) _____

c) _____

d) How many moles of CO₂ are produced by 5 moles of CH₄?

e) How many grams of CO₂ are produced by 5.00 moles of CH₄?

d) _____

f) If only 210.0 grams of CO₂ are produced in part e what is the percent yield?

e) _____

f) _____

3) Consider the following synthesis reaction



a) Balance the equation in the spaces provided.

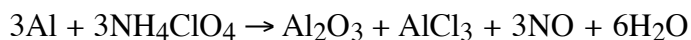
b) How many moles of Fe are needed to react with 25.0 grams of Cl₂?

c) How many grams of Fe are needed to make 12.50 grams of FeCl₃? b) _____

d) How many grams of FeCl₃ are made by 71.00 grams of Cl₂? c) _____

d) _____

4) The reusable booster rockets of the US space shuttle employ a mixture of aluminum and ammonium perchlorate for fuel. A possible equation for the reaction is:



a) Using this balanced equation calculate the mass of water produced when 100.0 grams of aluminum react.

b) Calculate the mass of water produced by the reaction of 100.0 grams of ammonium perchlorate? a) _____

c) Which of these two reagents is the limiting reactant? b) _____

d) How much of the excess reagent remains after the reaction? c) _____

e) How much of the limiting reagent remains after the reaction? d) _____

e) _____