

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

10 Pts.

**Honors Chemistry Test: Marathon Problem –online**  
**Perfect Score (with sig figs and units) Rewards 10 Test Bonus Points**  
**Show your answer in the appropriate box. Box final answer.**

11.51 grams of manganese (IV) acetate is reacted with 5.82 grams of sodium hydroxide.  
3.26 grams of precipitate is actually formed.

- a.) Write a balanced chemical equation with correct formulas for this reaction that takes place and includes phase notation. (2 pts.)  
b.) Determine and name the precipitate. (Roman Numerals) (1 pts.)  
c.) Identify the limiting reactant. (2 pts.)  
d.) Calculate the theoretical yield of precipitate formed. (2 pts.)  
e.) Find the percent yield? (1 pts.)  
f.) What mass of excess reactant is wasted? (2 pts.)

a.)

b.)

c.)

d.)

e.)

f.)