

Name \_\_\_\_\_

Date \_\_\_\_\_

Due Date \_\_\_\_\_

Mark \_\_\_\_\_ / 31

*Correct and Hand in Again by* \_\_\_\_\_**Chemistry 11****Hand In Assignment # 10 – Stoichiometry Problems**

***This Assignment will be marked and you are allowed to do one set of corrections. Show all of your work, including units in your work and answers.***

1. Given the following balanced equation, answer the questions following it:



- a. If 2.50 moles of Na are reacted, how many moles of ZnI<sub>2</sub> will be consumed? (1 mark)

Answer \_\_\_\_\_

- b. In order to produce 0.350 moles of NaI, how many moles of ZnI<sub>2</sub> would be consumed? (1 mark)

Answer \_\_\_\_\_

- c. If you needed to produce 35.976 g of NaI, how many moles of Na would you need to start with? (2 marks)

Answer \_\_\_\_\_

- d. If you completely react 526.68 g of ZnI<sub>2</sub>, what mass of NaZn<sub>4</sub> will be produced? (3 marks)

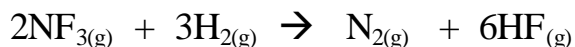
Answer \_\_\_\_\_

- e. In order to produce 692.538 g of NaI, what mass of ZnI<sub>2</sub> is required? (3 marks)

_____
10

Answer \_\_\_\_\_

2. Given the following balanced equation, answer the questions following it:



- a. If 15.008 L of hydrogen gas are consumed at STP, how many moles of HF would be formed?(3 marks)

Answer \_\_\_\_\_

- b. In order to produce 3.50 grams of N<sub>2</sub>, how many Litres of NF<sub>3</sub> at STP would be required? (3 marks)

Answer \_\_\_\_\_

- c. If 188.608 L of N<sub>2</sub> are formed at STP, how many Litres of HF would be produced at the same time? (3 marks)

Answer \_\_\_\_\_

- d. If 482.8 g of NF<sub>3</sub> are consumed, how many molecules of H<sub>2</sub> would be consumed at the same time? (3 marks)

Answer \_\_\_\_\_

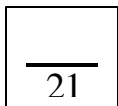
- e. If  $2.7692 \times 10^{23}$  molecules of HF are produced, what volume of N<sub>2</sub> would be produced at STP? (3 marks)

Answer \_\_\_\_\_

- f. What mass of H<sub>2</sub> would be required to produce 282.24 L of HF at STP? (3 marks)

Answer \_\_\_\_\_

- g. The consumption of 1.12 L of H<sub>2</sub> at STP would result in the formation of how many moles of HF? (3 marks)



Answer \_\_\_\_\_