**Quiz 5 Chemical Principles I Chem 1984 Fall 2013**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/25**

**Assume :**

**1 mol count=6\*1023**

**6HCl + 2Al -----🡪 2AlCl3 + 3H2**

36 27 123 2 g/mol

**Given the balanced reaction and molecular weights above:**

1. How many **moles of Al** must be added to produce 7.5 moles of H2 ?

**mol Al=\_\_\_\_\_\_\_\_\_**

1. How many **grams of H2** are created by reacting 4 moles of HCl ?

**grams H2 =\_\_\_\_\_\_\_\_**

1. How many **grams of Al** must react to form 0.333 grams H2 ?

**grams Al= \_\_\_\_\_\_\_\_**

1. How many **molecules of HCl** are needed to create 13.667 g AlCl3 ?

**molecules HCl=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. If you form **3.333 \*1022 molecules of H2 ,** how many grams of Al reacted ?

**grams Al = \_\_\_\_\_\_\_\_\_\_\_\_\_\_**