Chemistry
Molarity Stoichiometry

Name:

Hour:

Balance the following equations and then answer the question that follows.

1. ____ $F_{2(g)}$ + _____ $AlCl_{3(aq)}$ ⟶ _____ $AlF_{3(aq)}$ + _____ $Cl_{2(g)}$

How many grams of chlorine gas can be produced from 100mL of 0.5M $AlCl_3$?

2. _____ HCl +_____Na_2CO_3 ⟶ _____ NaCl + _____ H_2O + _____ CO_2

How many grams of Na_2CO_3 are needed to completely react with 25mL of 3.0M HCl?

3. _____ H_2SO_4 + _____ NaOH ⟶ _____ H_2O + _____ Na_2SO_4

How many milliliters of 0.5M NaOH are needed to neutralize 75.0mL of 0.1M H_2SO_4?

4. _____$AgNO_3$ + _____$CaCl_2$ ⟶ _____AgCl + _____$Ca(NO_3)_2$

How many grams of AgCl can be produced from 150mL of 0.15M $AgNO_3$?

5. _____$Al_2(SO_4)_3$ + _____$BaCl_2$ ⟶ _____$BaSO_4$ + _____ $AlCl_3$

How many grams of $BaSO_4$ can be produced from 25mL of 2.0M $BaCl_2$? *(Assume the volume is constant)*