Name _____ Date _____ Period _____

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Solution Stoichiometry

Chemistry

Moles are the bridge: L × M → mol A → mole ratio → mol B → grams or liters of B. Change mL to L first. Use coefficients, never subscripts.

1. $BaCl_2 + Na_2SO_4 \rightarrow BaSO_4 + 2NaCl$. What mass of $BaSO_4$ forms from 30.0 mL of 0.150 M $BaCl_2$ with excess Na_2SO_4?

2. $CaCl_2 + 2AgNO_3 \rightarrow 2AgCl + Ca(NO_3)_2$. What volume of 0.200 M $AgNO_3$ reacts completely with 15.0 mL of 0.300 M $CaCl_2$?

3. $Mg + 2HCl \rightarrow MgCl_2 + H_2$. What mass of Mg reacts with 25.0 mL of 2.00 M HCl?

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4. $2HCl + Ba(OH)_2 \rightarrow BaCl_2 + 2H_2O$. What volume of 0.100 M HCl neutralizes 30.0 mL of 0.150 M $Ba(OH)_2$?

5. $Pb(NO_3)_2 + 2KI \rightarrow PbI_2 + 2KNO_3$. What mass of the yellow precipitate PbI_2 forms from 50.0 mL of 0.100 M KI with excess $Pb(NO_3)_2$?

6. Balance first: $Al + HCl \rightarrow AlCl_3 + H_2$. Then find the mass of Al that reacts with 75.0 mL of 1.00 M HCl.

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