CHM 110
Chemical Calculations Quiz
Name: $\qquad$
Due: 10/8/07 at 10:10 AM
Solve the following problems. Write your final answers in the blanks provided, and show work for any possible partial credit. [20]

1) How many grams of solid sodium hydroxide would be required to neutralize 75.0 mL of $9.00 \mathrm{M} \mathrm{H}_{2} \mathrm{SO}_{4}$ ?
$\mathbf{2 N a O H}+\mathbf{H}_{2} \mathbf{S O}_{\mathbf{4}}-->\mathbf{2 H}_{2} \mathrm{O}+\mathrm{Na}_{2} \mathbf{S O}_{4}$
$\qquad$ g NaOH
2) How many grams of AgCl could be produced from 25.0 g of $\mathrm{MgCl}_{2}$, assuming that there is sufficient silver nitrate available for reaction.
$\mathbf{M g C l}_{2}+\mathrm{AgNO}_{3} \boldsymbol{- - >} \mathbf{A g C l}+\mathbf{M g}\left(\mathrm{NO}_{3}\right)_{2}$
$\qquad$ g AgCl
3) If you start with 50.0 g of $\mathrm{MgCl}_{2}$ and 50.0 g of $\mathrm{AgNO}_{3}$, how many grams of AgCl could be produced in the reaction?

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\mathbf{M g C l}_{2}+\mathrm{AgNO}_{3}-->\mathrm{AgCl}+\mathrm{Mg}\left(\mathrm{NO}_{3}\right)_{2}
$$

- $\qquad$ g AgCl

4) You want to produce 250.0 mL of $6.00 \mathrm{M} \mathrm{HNO}_{3}$. How many milliliters of $15.8 \mathrm{M} \mathrm{HNO}_{3}$ would you need to dilute to prepare the solution?
5) If you dissolve 6.0 grams of NaOH in enough water to make 200.0 mL of solution, what is the molar concentration (molarity) of the solution?
