

Chem ch 14  
molarity

$$\textcircled{1} \left( \frac{4.00 \text{ moles NaOH}}{3.50 \text{ L}} \right) = \boxed{1.14 \text{ M NaOH}}$$

$$\textcircled{2} \left( \frac{.250 \text{ moles H}_2\text{SO}_4}{.500 \text{ L}} \right) = \boxed{.500 \text{ M H}_2\text{SO}_4}$$

$$\textcircled{3} \left( \frac{.75 \text{ moles LiOH}}{245 \text{ mL}} \right) \left( \frac{1000 \text{ mL}}{1 \text{ L}} \right) = \boxed{3.1 \text{ M LiOH}}$$

$$\textcircled{4} \left( \frac{.50 \text{ moles NaOH}}{1 \text{ L}} \right) \left( \frac{1.5 \text{ L}}{1} \right) = \boxed{.75 \text{ moles NaOH}}$$

$$\textcircled{5} \left( \frac{18 \text{ moles H}_2\text{SO}_4}{1 \text{ L}} \right) \left( \frac{585 \text{ mL}}{1} \right) \left( \frac{1 \text{ L}}{1000 \text{ mL}} \right) = \boxed{11 \text{ moles H}_2\text{SO}_4}$$

$$\textcircled{6} \left( \frac{.22 \text{ moles KCl}}{1 \text{ L}} \right) \left( \frac{.80 \text{ L}}{1} \right) = \boxed{.18 \text{ moles KCl}}$$

$$\textcircled{7} \left( \frac{1.30 \text{ moles H}_2\text{SO}_4}{1 \text{ L}} \right) \left( \frac{935 \text{ mL}}{1} \right) \left( \frac{1 \text{ L}}{1000 \text{ mL}} \right) = \boxed{1.15 \text{ moles H}_2\text{SO}_4}$$

$$\textcircled{8} \left( \frac{1.6 \text{ moles NaOH}}{1 \text{ L}} \right) \left( \frac{3.00 \text{ L}}{1} \right) \left( \frac{40.0 \text{ g NaOH}}{1 \text{ mole NaOH}} \right) = \boxed{190 \text{ g NaOH}}$$

$$\textcircled{9} \left( \frac{.45 \text{ moles HNO}_3}{1 \text{ L}} \right) \left( \frac{.50 \text{ L}}{1} \right) \left( \frac{63.0 \text{ g HNO}_3}{1 \text{ mole HNO}_3} \right) = \boxed{14 \text{ g HNO}_3}$$

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$$\textcircled{10} \left( \frac{1.55 \text{ moles CaCO}_3}{1 \text{ L}} \right) \left( \frac{425 \text{ ml}}{1} \right) \left( \frac{1 \text{ L}}{1000 \text{ ml}} \right) \left( \frac{100.1 \text{ g CaCO}_3}{1 \text{ mole CaCO}_3} \right)$$

$= 65.9 \text{ g CaCO}_3$

$$\textcircled{11} \left( \frac{1.35 \text{ moles Mg(NO}_3)_2}{1 \text{ L}} \right) \left( \frac{602 \text{ ml}}{1} \right) \left( \frac{1 \text{ L}}{1000 \text{ ml}} \right) \left( \frac{148.3 \text{ g Mg(NO}_3)_2}{1 \text{ mole Mg(NO}_3)_2} \right)$$

$= 121 \text{ g Mg(NO}_3)_2$