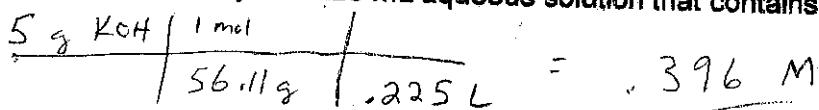


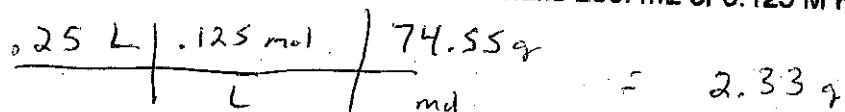
## Solutions - Molarity - Stoichiometry

Name \_\_\_\_\_

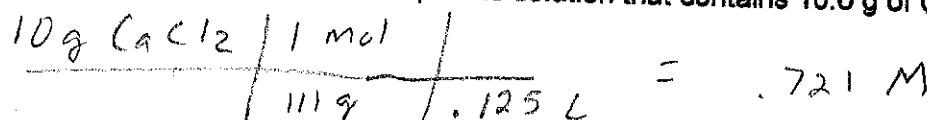
1. What is the molarity of a 225 mL aqueous solution that contains 5.00 g of KOH?



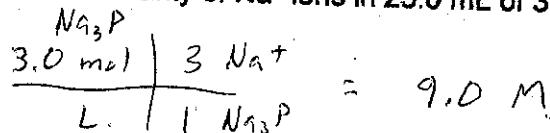
2. How many grams of KCl do you need to make 250. mL of 0.125 M  $\text{KCl}_{(\text{aq})}$ ?



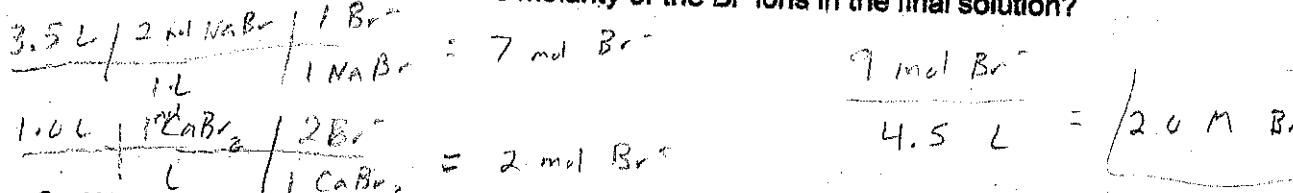
3. What is the molarity of a 125 mL aqueous solution that contains 10.0 g of  $\text{CaCl}_2$ ?



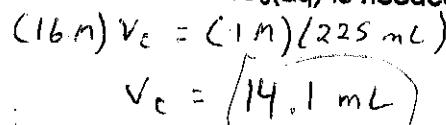
4. What is the molarity of  $\text{Na}^+$  ions in 25.0 mL of 3.0 M  $\text{Na}_3\text{P}_{(\text{aq})}$ ?



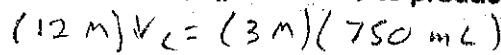
5. 3.5 L of 2.0 M  $\text{NaBr}_{(\text{aq})}$  is added to 1.0 L of 1.0 M  $\text{CaBr}_2_{(\text{aq})}$ . Assuming that the final volume is 4.5 L, what is the molarity of the  $\text{Br}^-$  ions in the final solution?



6. What volume of 16.0 M  $\text{HNO}_3_{(\text{aq})}$  is needed to make 225 mL of 1.00 M  $\text{HNO}_3_{(\text{aq})}$ ?

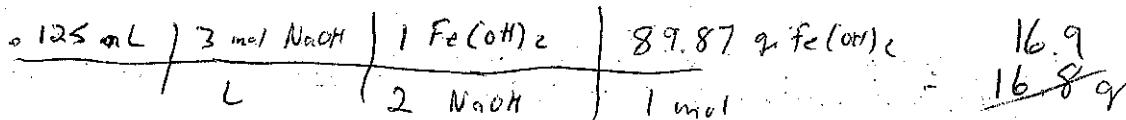


7. What volume of 12.0 M  $\text{HCl}_{(\text{aq})}$  is needed to produce 750 mL of 3.0 M  $\text{HCl}_{(\text{aq})}$ ?



$$V_c = 188 : 190 \text{ mL}$$

8. For the rxn:  $\text{FeCl}_{2(\text{aq})} + 2 \text{ NaOH}_{(\text{aq})} \rightarrow \text{Fe(OH)}_{2(\text{s})} + 2 \text{ NaCl}_{(\text{aq})}$  How many grams of  $\text{Fe(OH)}_{2(\text{s})}$  can be produced from 125 mL of 3.00 M  $\text{NaOH}_{(\text{aq})}$ ?



9. For the rxn:  $\text{FeCl}_{2(\text{aq})} + \text{Na}_2\text{CO}_3_{(\text{aq})} \rightarrow 2 \text{ NaCl}_{(\text{aq})} + \text{FeCO}_3_{(\text{s})}$   
What mass of precipitate can form from 125 mL of 3.5 M  $\text{FeCl}_2_{(\text{aq})}$ ?

