Practice – Mixing Strong Acids and Bases

1.) Calculate the pH resulting from mixing $50.0\ mL$ $0.150\ M\ NaOH$ with $50.0\ mL$ $0.200\ M\ HCl$.

2.) Calculate the pOH resulting from mixing $75.0\ mL$ $0.200\ M\ HBr$ with $225.0\ mL$ $0.150\ M\ KOH$.

3.) Calculate the pH when $100.0\ mL$ of $5.00\ g\ LiOH$ is mixed with $100.0\ mL$ of $6.00\ g\ HCl$.

4.) How much HCl $_{(g)}$ would need to be added to $1.00\ L$ of $0.0120\ M\ LiOH$ solution, to make a final solution with a pH of 11.30?

5.) How much NaOH, in grams, would need to be added to $0.750\ L$ of $0.055\ M\ HBr$ solution, to make a final solution with a pH of 1.75?

6.) What mass of $Mg(OH)_2$ would need to be added to $0.400\ L$ of $0.0175\ M\ HCl$ solution, to make a final solution with a pH of 3.55?