

## Chem12 Dilution Problems : W.S.-50

- 1)a) Find the new concentration of KCl if 200.0 mL of 4.10 M KCl is diluted by adding 300.0 mL of water.
- b) Find the new concentration of NaOH if 30.0 mL of 0.50 M NaOH is diluted to 4.0 L (the total volume equals 4.0 L).
- c) Find the new concentration if 50.0 mL of 12M HCl acid is added to 450.0 mL of water.
- d) What is the final concentration of HCl if 1.0 L of 2.0 M HCl solution is added to 1.0 L of 1.5 M HCl solution ?
- e) A chemist has 40.0 g of ammonium iodide. He wants to make a 0.30 M solution. He adds the salt to 500.0 mL of water. How much more water must be added to make a solution with the required concentration ?

Answers : 1)a) 1.64 M, b) 0.0038 M, c) 1.2 M, d) 1.8 M, e) 0.42 L.