(a)19.7 grams of NaHCO₃ is placed in a 100.0 mL volumetric flask and water is added to the mark. What is the molarity of the solution?

(b) You want to make 200.0 ml of 0.50 M NaHCO $_3$ solution. How much of your solution from part (a) do you need?

You have a stock solution of sulfuric acid (H_2SO_4) that is 6.0 M. You want to make 500 ml of 1.5 M sulfuric acid. What volume of acid is needed and what volume of water is needed to prepare this solution?

You have 2.30 L of 0.150 KOH solution. How many grams of KOH does the solution contain?

You have used 34.00 grams of H_2SiF_6 to prepare a solution with a molarity of 0.70 M. What is the volume of your solution?

You combine 25 mL of 0.400 M CuSO4 solution with 150 mL of water. What is the molarity of the solution that you made?

You want to make 200 mL of 0.5 M HCl. What volume of 1.6 M HCl do you need?

Show me how smart you are! This problem goes beyond what we have done in class - see how far you can get. Start all problems by identifying what you know and what you don't know, and go from there!

How many milliliters of 3.0 M potassium sulfate solution must be added to 160 mL of water to achieve a 0.20 M potassium sulfate solution?

How many grams of KNO₃ can dissolve in 500g of H_2O at 70°C?



Temperature (°C)

Describe (using words and numbers) what would happen if you put 100g of KBr into 100g of water at 5° C.



Temperature (°C)

A saturated solution of NaClO $_3$ was prepared using 100g of water at 75°C was prepared.

- (a) How many grams of NaClO3 were used?
- (b) How much precipitate would form if the solution was cooled to 35°C?



Temperature (°C)