Name: _____

Block: _____

Concentration Problems

1. What is the molarity of a solution that contains 25.2 g of KNO_3 (F.W. = 101.1) dissolved in enough water to make a total volume of 200 mℓ of solution?

2. What is the molarity of a solution that contains 22.5 g of NaI (F.W. = 149.89) dissolved in enough water to make a total volume of 500. mℓ of solution?

3. How many grams of NaOH (F.W. = 40.00) would you dissolve in water to make 1.0 ℓ of a 2.0 M solution?

4. How many grams of KCl (F.W. = 74.55) would you need to make 250 mℓ of a 0.10 M solution?

5. How many mℓ of 12 M HCl would you add to water to make 500. mℓ of a 1.0 M solution?

6. If you put two teaspoons (8.0 g) of sugar ($C_{12}H_{22}O_{11}$) into 300. mℓ of coffee, what is the concentratin (molarity) of sugar in the resulting solution?