Name _____   Period _____

Molarity Problems

1. What is the molarity of 4.500 moles of HCl diluted to 1.500 liters?

2. If 20.00 grams of NaOH are diluted in enough water to make 1.000 liter, what is the molarity of the solution?

3. How many grams of KOH are needed to makes 2.00 liters of 1.00 M solution?

4. What volume of NaCl is needed to have 8.75 moles if the solution is 1.50-M?

5. Concentrated HNO_3 is 15.6 Molar. If I want to prepare 1.00 L of 1.00 M solution how many mL's of concentrate do I need to dissolve?

6. Sulfuric acid comes as an 18.1 Molar concentrate. If I am making 200.0 mL of 2.00 molar how many millilitres of concentrate do I need to dilute?

7. It is possible to buy NaOH as a liquid that is 19.1 M. If you need 3.79 L (1 gallon) of 0.50M how many millilitres of concentrate do you need to dilute?
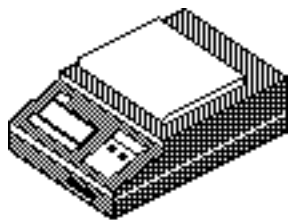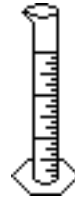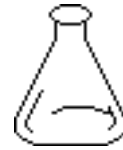
Balance   Beaker   Volumetric Flask   Graduated Cylinder   Erlenmeyer Flask

8. You have the equipment pictured above. Describe how you would prepare 1.00 L of 1.00 M KNO_3 from the solid.

9. You have the equipment pictured above. Describe how you would prepare 1.00 L of 1.00 M HCl from the 12.1-M concentrate.

10. Draw a picture of the procedure you would follow to make 1.00 L of 0.250M NaOH. Make sure to include all mathematical detail.