Making Solutions Practice Problems:

1. How would you prepare 100 ml of a 30% (w/v) solution of polyethylene glycol (PEG)?

2. How would you prepare 50 ml of a 9% (w/v) solution of NaCl?

3. How would you prepare 200 ml of 70% (v/v) solution of ethanol from a stock of 95% ethanol?

4. How would you prepare 200 ml of 0.3 M NaCl? (NaCl MW = 58.44)

5. How are 50 ml of 20 millimolar (mM) sodium hydroxide (NaOH MW = 40) prepared?

6. How would you prepare a 1 l stock solution of 1M Tris pH 7.5? (FW = 121.21)

Diluting Solutions Practice Problems:

1. You have a 20% stock solution of glucose. For your experiment, you need 2 ml of 5 % glucose. How much of the 20% stock solution will you transfer?

2. How many microliters of a 20% SDS solution is required to prepare a 1.5 ml solution of 0.5% SDS?

3. From a stock solution of 1 M Tris, how would you prepare 400 ml of 0.2 M Tris?

4. How much do you need of 2 M NaCl to prepare 4 ml of 50 mM NaCl?

5. How would you prepare 50 ml of 0.2 N HCl from a stock solution of 1 N HCl?