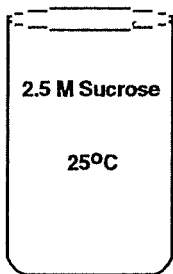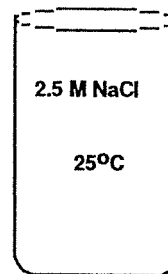This exercise will familiarize you with the mechanics of calculating a water potential, and must be completed before attempting AP Lab #1.

Open Beaker A

2.5 M Sucrose

25°C

Open Beaker B

2.5 M NaCl

25°C

Directions:

Complete the computations for beaker A and STOP at the dotted line below. Following a brief class discussion we will complete the calculations for beaker B and then answer the questions below the dotted line.

	Write Symbol	Write Value (A)		Write Symbol	Write Value (B)
Pressure Potential =	_____	_____	Pressure Potential =	_____	_____
Ionization Constant =	_____	_____	Ionization Constant =	_____	_____
Molar Concentration =	_____	_____	Molar Concentration =	_____	_____
Pressure Constant =	_____	_____	Pressure Constant =	_____	_____
Temperature °K =	_____	_____	Temperature °K =	_____	_____

	Write symbol below	Write formula below		Write Symbol below	Write Formula below
Solute Potential =	_____	_____	Solute Potential =	_____	_____

	Show calculations below		Show calculations below
Solute Potential =	_____	Solute Potential =	_____

	Show answer below		Show answer below
Solute Potential =	_____	Solute Potential =	_____

Show the complete formula for the calculation of water potential. Use both **symbols** and **words**.

_____ = _____ + _____

Substitute the numerical values for Beaker A   Substitute the numerical values for Beaker B

psi Beaker A = _____ + _____   psi Beaker B = _____ + _____

psi Beaker A = _____   psi Beaker B = _____

....

1.) Which beaker has the greatest free energy of water?_____

2.) If the beakers were connected by a membrane permeable only to water would the net movement of water be from.........

A to B   or   B to A   (Circle the correct answer)