**Dougherty Valley HS AP Chemistry**

**S-71**

**Solutions**

**Quick Check #4**

**Name: Date: Period: Seat #:**

* **Raoult’s Law:**   
  Write the formula for Raoult’s Law: Psolution =

A solution is made by dissolving 164 g of glycerin (C3H8O3) in 338 mL of H2O at 40.0 °C.

The vapor pressure of pure H2O at 40.0 °C is 54.74 torr.

The density of H2O at 39.8 °C is 0.992 g/mL. The molar mass of glycerin is 92.11 g/mol.

a) How many moles of glycerin are in this solution?

b) How many moles of water are in this solution?

c) What is the mole fraction, *X*, of solvent in this solution?

d) Calculate the vapor pressure of the solution.

* **Osmotic Pressure:** **SKIP**  
  Blood has an osmotic pressure of 7.65 atm at 37 °C. What concentration of glucose (C6H12O6) should be used for an intravenous solution to match the blood?

a) What is the formula for osmotic pressure?  =

b) Calculate the concentration.

