CHM 1046 - JOENS WORKSHEET #1 Due date: Monday, August 27th

WORKSHEETS ARE DUE AT THE BEGINNING OF CLASS ON THE DATE GIVEN ON THE WORKSHEET. LATE WORKSHEETS WILL NOT BE ACCEPTED.

NAME _____ Panther ID _____

For problems involving calculations you must show your work for credit.

1) Which of the following mixtures of pure chemical substances would be expected to form a solution?

a) A mixture of oxygen gas (O_2) and nitrogen gas (N_2)
b) A mixture of potassium nitrate (KNO_3) and liquid water (H_2O)
c) A mixture of liquid cyclohexane (C_6H_{12}) and liquid water (H_2O)
d) both a and b
e) both a and b and c

_____

2) A liquid solution of methyl alcohol (CH_3OH, MW = 32.03 g/mol) and water (H_2O, MW = 18.02 g/mol) is 16.35 % by mass methyl alcohol. The density of the solution (at T = 20.0 °C) is D = 0.9721 g/cm^3. What are the molarity, molality, and mole fraction of methyl alcohol in the solution?