HW Set #8 Due (11/16/10) at the beginning of class

Work the following problems in chapter 10
16, 18, 19, 20, 24, 28

Work the following problems in chapter 9
8, 14, 18, 28, 34, 42, 57, 80, 94

More problems

Ethanol (CH_3CH_2OH) and Dimethyl Ether (CH_3OCH_3) both have 2 carbons, 6 hydrogens, and an oxygen. Which do you think will have a higher boiling point. Explain in terms of specific intermolecular forces?

Air is primarily a mixture of N_2 and O_2. At 25° which gas has a higher average kinetics energy (or are they the same)? Which gas has a high average speed (or are they the same)?

Which has a faster mean square velocity, H_2 at temperature T or He at a temperature of 1.5T?

At 298.15 K and a pressure of 100 bar, 1 mole of a real gas has volume of 0.238 L. Are the intermolecular forces for this gas dominated by repulsions or attractions?

Of the following gases which would you expect to be have the most ideally and which the least?
NH_3, CH_4, Ar

Acetylene gas C_2H_2 reacts with hydrogen H_2 in the presence of a catalyst to form ethane C_2H_6.
Write a balanced equation for this reaction (all species are gases).

If 1 mole of acetylene is mixed with 4 moles of hydrogen and the reaction takes place in a container at a constant pressure of 1 atm and a temperature of 100°C what is the final volume of the container?

What are the partial pressures of the gases that remains after the reaction?