Class 30

Review
Announcements

• Tutorial session, 5:30pm Thursday, probably in CHEM 138
Concepts review

1. Fluids
   1. Archimedes principle (Buoyancy)
   2. Fluids flowing
      1. Bernoulli’s equation (ideal fluid)
      2. Poiselle’s equation (viscous fluid)

2. Stress/strain (Young’s Modulus)

3. Ideal gases
   1. General: \( PV=nRT \)
   2. Kinetic theory (reln of PVT with velocity of gas atoms)

4. 1\textsuperscript{st} law of TD: \( \Delta U=Q+W \)
Concepts

4. Heat vs. Temperature
   1. Specific heat
   2. Latent heat

5. Effect of heat
   1. Thermal expansivity

6. Heat moving
   1. Thermal conductivity
Problem Solving Overview

• Things to remember:
  – T in kelvin always in ideal-gas problems
  – 1 liter = 1x10^-3 m^3
  – Density of water = 1kg/liter = 1x10^3 kg/m^3
  – Density of a fluid = (specific gravity of fluid) x (density of water)
  – Gauge pressure = P - P_0 = \rho gh

• Recognize your equations