

# 2 & 3

Problems

1-7. Give the physical dimensions of dynamic viscosity and kinematic viscosity. What is the conversion factor relating these viscosities?

1-23. What is the ratio of the kinematic viscosity of water to that of air if the pressure is 120 psia and the temperature of both fluids is 60°F?

1-24. The dynamic and kinematic viscosities of a liquid are  $3.229 \times 10^{-5}$  and  $1.664 \times 10^{-5}$  respectively. (a) Determine its density; (b) if the liquid is water, what is its temperature?

1-21. Determine the pressure required to reduce a given volume of water 2 percent, if the initial pressure is standard atmospheric pressure ( $T = 60^\circ\text{F}$ ).

1-22. If water boils at 170°F, what is the atmospheric pressure?

due Wednesday  
Jan 11<sup>th</sup>