A moist-air mixture has a dry-bulb temperature of 85°F and a relative humidity of φ = 60%. The total pressure of the mix is 14.7 psia.

(a) If the water vapor existed alone at T_{mix} and V_{mix}, what would its pressure be? I.e., determine the

<div align="center">Partial pressure (or vapor pressure)</div>

(b) For every lbm of dry air, how much water vapor is there? I.e., determine the

<div align="center">Humidity ratio</div>

(c) If you cooled this mix at constant pressure, at what temperature would the water start condensing? I.e., determine the

<div align="center">Dew point temperature</div>

(d) Determine the enthalpy of the mixture **per unit mass of dry air.** Is this the same as H_{mix}/m_{mix}?

(e) If the mixture is cooled to T= 60°F, how much liquid condenses per lbm of dry air? NEW!