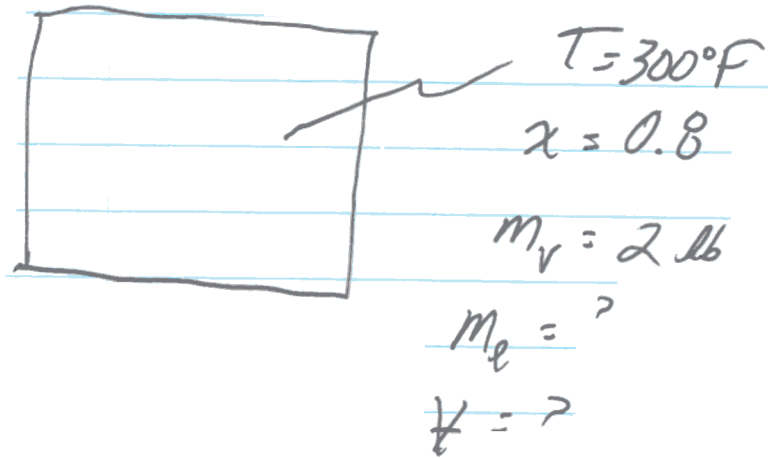


M.S. 3.20



$$x = \frac{m_v}{m_v + m_e} \Rightarrow 0.8 = \frac{2.0 \text{ lb}}{m_e + 2.0 \text{ lb}}$$

$$m_e = 0.5 \text{ lb}$$

$$m = 2.5 \text{ lb}$$

$$v = (1-x)v_f + xv_g$$

$T \text{ 615} \rightarrow \text{Saturated}$ $T \text{ 300}^\circ\text{F} \Rightarrow$

$$v_f = 0.01745 \text{ ft}^3/\text{lb}$$
$$v_g = 6.472 \text{ ft}^3/\text{lb}$$

$$v = (1 - 0.8)(0.01745) + (0.8)(6.472)$$
$$v = 5.18 \text{ ft}^3/\text{lb}$$

$$V = (5.18 \frac{\text{ft}^3}{\text{lb}})(2.5 \text{ lb})$$

$$V = 12.9 \text{ ft}^3$$