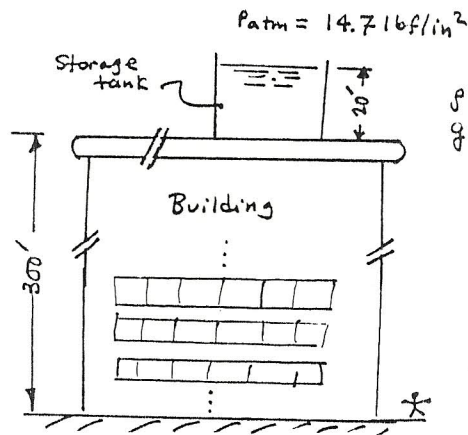


PROBLEM 1.43



$$\rho = 62.2 \text{ lb/ft}^3$$

$$g = 32.0 \text{ ft/s}^2$$

The pressure at the bottom of the storage tank is

$$P = P_{atm} + \rho g L$$

$$= 14.7 \frac{\text{lbf}}{\text{in}^2} + \left(62.2 \frac{\text{lb}}{\text{ft}^3} \right) \left(32.0 \frac{\text{ft}}{\text{s}^2} \right) \left(20 \text{ ft} \right) \left| \frac{1 \text{ ft}^2}{144 \text{ in}^2} \right| \left| \frac{1 \text{ lbf}}{32.2 \text{ lbf/s}^2} \right|$$

$$= 14.7 \frac{\text{lbf}}{\text{in}^2} + 8.6 \frac{\text{lbf}}{\text{in}^2} = 23.3 \frac{\text{lbf}}{\text{in}^2}$$

← Rounded