

Ex 12-1, 2
p 374-6

$$m_{\text{air}} = \rho_{\text{air}} V = (1.20 \text{ kg m}^{-3}) [(4\text{m})(5\text{m})(3\text{m})]$$

$$\underline{m_{\text{air}} = 72 \text{ kg}}$$

$$W_{\text{air}} = m_{\text{air}} g = (72 \text{ kg})(9.8 \text{ m s}^{-2}) =$$

$$\underline{W_{\text{air}} = 700 \text{ N}}$$

$$\text{Pressure, } P = \frac{F}{A}$$

$$1 \text{ atm} = 1.013 \times 10^5 \text{ N m}^{-2}$$

$$F = PA = (1.013 \times 10^5 \text{ N m}^{-2})(4\text{m})(5\text{m})$$

$$\underline{F = 20 \times 10^6 \text{ N}}$$

