

69. The initial data concerning the balloon is indicated by the subscript 1. As in Sample Problem 1, we use the gas law in ratio form:

$$\frac{p_1 V_1}{p_2 V_2} = \frac{T_1}{T_2} \implies V_2 = (2.2 \text{ m}^3) \left( \frac{760 \text{ torr}}{380 \text{ torr}} \right) \left( \frac{225 \text{ K}}{293 \text{ K}} \right) = 3.4 \text{ m}^3 .$$