

Boyle's Law - One Problem

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A gas occupies 2.45 L at a pressure of 475mmHg. If I decrease the pressure to 262mmHg, what is the new volume (in L) ?

$$V_1 = 2.45 \text{ L}$$

$$V_2 = V_1 \left(\frac{P_1}{P_2} \right)$$

$$P_1 = 475 \text{ mmHg}$$

$$V_2 = (2.45 \text{ L}) \left(\frac{475 \text{ mmHg}}{262 \text{ mmHg}} \right)$$

$$P_2 = 262 \text{ mmHg}$$

$$V_2 = ?$$

$$V_2 = 4.441 \text{ L}$$

$$\boxed{V_2 = 4.44 \text{ L}}$$

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