

## Boyle's Law Worksheet

$$\textcircled{1} \quad P_1 V_1 = P_2 V_2$$

$$(99.0 \text{ kPa})(300.0 \text{ mL}) = (188 \text{ kPa}) V_2$$

$$V = \underline{158 \text{ mL}}$$

$$\textcircled{2} \quad P_1 V_1 = P_2 V_2$$

$$(0.988 \text{ atm})(1.00 \text{ L}) = P_2 (2.00 \text{ L})$$

$$P = \underline{0.494 \text{ atm}}$$

$$\textcircled{3} \quad P_1 V_1 = P_2 V_2$$

$$(1.08 \text{ atm})(145.7 \text{ mL}) = (1.43 \text{ atm}) V_2$$

$$V = \underline{110. \text{ mL}}$$

$$\textcircled{4} \quad P_1 V_1 = P_2 V_2$$

$$(0.980 \text{ atm})(4.00 \text{ L}) = P_2 (0.0500 \text{ L})$$

$$P = \underline{78.4 \text{ atm}}$$

$$\textcircled{5} \quad 1 \text{ atm} = 101.3 \text{ kPa}$$

$$0.860 \text{ atm} = x$$

$$\frac{(101.3 \text{ kPa})(0.860 \text{ atm})}{1 \text{ atm}} = 87.118 \text{ kPa}$$

$$P_1 V_1 = P_2 V_2$$

$$(87.118 \text{ kPa})(0.220 \text{ L}) = (29.2 \text{ kPa}) V_2$$

$$V = \underline{0.656 \text{ L}}$$