

• un gas ocupa 205 millilitros a 20°C y 1.05 atm. Calcule el volumen final a 60°C y 2.4 atm de presión.

$$V_1 = 205 \text{ ml} / 1000 = 0.205 \text{ l}$$

$$T_1 = 20^{\circ}\text{C} + 273 = 293 \text{ K}$$

$$P_1 = 1.05 \text{ atm}$$

$$T_2 = 60^{\circ}\text{C} + 273 = 333 \text{ K}$$

$$P_2 = 2.4 \text{ atm}$$

$$V_2 = \frac{(1.05 \text{ atm})(0.205 \text{ l})(333 \text{ K})}{(2.4 \text{ atm})(293 \text{ K})}$$

$$V_2 = \frac{71.67}{703.2} = 0.10 \text{ l}$$

• calcule la presión final si el volumen es de 440 ml a 70°C y 920 mmHg de presión si llega hasta 5.6 l de volumen a 100°C .

$$V_1 = 440 \text{ ml} / 1000 = 0.44 \text{ l}$$

$$T_1 = 70^{\circ}\text{C} + 273 = 343 \text{ K}$$

$$P_1 = 920 \text{ mmHg} / 760 = 1.21 \text{ atm}$$

$$V_2 = 5.6 \text{ l}$$

$$T_2 = 100^{\circ}\text{C} + 273 = 373 \text{ K}$$

$$P_2 = \frac{(1.21 \text{ atm})(0.44 \text{ l})(373 \text{ K})}{(5.6 \text{ l})(343 \text{ K})}$$

$$P_2 = \frac{198.58}{1920.8} = 0.10 \text{ atm}$$