P # B

Ch 10 Worksheet

$V_1 = 1.50\ m^3$

$T_1 = 27°C = 300\ K$

$P_1 = .200 \times 10^5\ Pa$

$V_2 = .700\ m^3$

$T_2 = ?$

$P_2 = .800 \times 10^5\ Pa$

n and R remain constant...

$$\frac{P_1 \cdot V_1}{T_1} = \frac{P_2 \cdot V_2}{T_2}$$

$$\frac{(.200 \times 10^5\ Pa)(1.50\ m^3)}{(300\ K)} = \frac{(.800 \times 10^5\ Pa)(.700\ m^3)}{T_2}$$

$$\boxed{T_2 = 560\ K\ (287°C)}$$