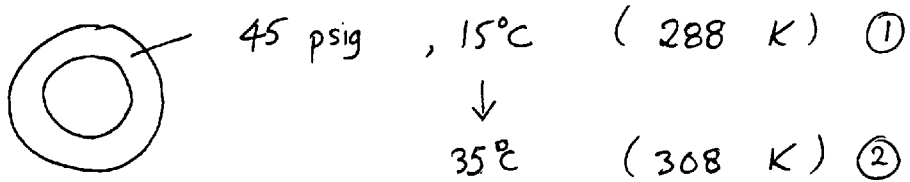


Ques 1.



$$1 \text{ psi} = 6.895 \text{ kPa} \quad \therefore 45 \text{ psig} = 310.28 \text{ kPa (gauge)}$$

$$\text{SSL pressure} = 101.325 \text{ kPa}$$

$$\therefore p \text{ (absolute)} = 310.28 + 101.325 = 411.6 \text{ kPa}$$

Since $\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2}$ (where $V_1 = V_2$)

$$p_2 = p_1 \frac{T_2}{T_1} = 411.6 \times \frac{308}{288} = \underline{\underline{440.18 \text{ kPa (abs.)}}}$$

$$\text{or } 338.86 \text{ kPa (gauge)}$$

$$\text{or } 49.15 \text{ psig.}$$