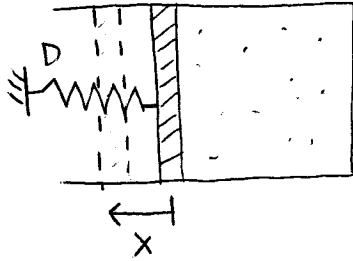


3.)

$$p_1 = 100 \text{ kPa} \quad T_1 = 300 \text{ K} \quad A = 100 \text{ cm}^2$$

$$V_1 = 1 \text{ l} \quad p_0 = 100 \text{ kPa}$$

$$D = 5 \text{ kN/m} \quad T_2 = 600 \text{ K} \quad p_2 = ?$$



$$pV = nRT$$

$$F_r = -Dx$$

$$V_2 = V_1 + Ax \quad p_1 = p_0$$

$$\text{dugo: } F_e = 0 = p_2 A - p_0 A - Dx \rightarrow p_2 = p_0 + \frac{Dx}{A} \quad \bullet$$

$$pV = nRT \rightarrow \frac{pV}{T} = \text{all}$$

$$\frac{p_1 V_1}{T_1} = \frac{p_2 V_2}{T_2} \rightarrow T_2 p_1 V_1 = T_1 p_2 V_2$$

$$T_2 p_0 V_1 = T_1 \left(p_0 + \frac{Dx}{A} \right) (V_1 + Ax)$$



$$\underline{\underline{x}} \rightarrow \underline{\underline{p_2}}$$