

Tressfysikk – Løsning oppgave 6.348

Vi bruker tilstandslikningen:

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

$$T_1 = 20 \text{ [}^\circ\text{C]} = (273+20) \text{ [K]} = 293 \text{ [K]} \quad p_1 = p_2$$

$$T_2 = ? \quad V_1 = 2,0 \text{ [m}^3\text{]} \quad V_2 = 3,0 \text{ [m}^3\text{]}$$

$$T_2 = T_1 \cdot \frac{V_2}{V_1} = 293 \cdot \frac{3,0}{2,0} \text{ [K]} = 440 \text{ [K]}$$

$$T_2 = 440 \text{ K} - 273 \text{ K} = \underline{167 \text{ [}^\circ\text{C]}}$$