

3.

$$\begin{aligned} \text{H}_2\text{O} \quad \odot \quad V_2 &= 2 \\ P_2 &= 101\,300 \text{ Pa} \\ T_2 &= T_1 \end{aligned}$$

$$\begin{aligned} V_1 &= \\ \uparrow \quad \circ \quad 2 \text{ cm}^3 \\ \text{Luftbubbla} \end{aligned}$$

$$\begin{aligned} P_1 &= P_{\text{vatska}} + P_{\text{luft}} \\ &= \rho \cdot g \cdot h + P_{\text{luft}} \\ &= 1000 \left[\frac{\text{kg}}{\text{m}^3} \right] \cdot 9,82 \left[\frac{\text{N}}{\text{kg}} \right] \cdot 18 \text{ [m]} + 101\,300 \text{ [Pa]} \\ &= 176\,760 + 101\,300 \\ &= 278\,060 \text{ Pa} \end{aligned}$$

$$\frac{P_1 V_1}{\cancel{P_1}} = \frac{P_2 V_2}{\cancel{P_2}}$$

samma

$$P_1 V_1 = P_2 V_2 \quad \text{sätt in värden eller}$$

lös ut V_2

$$V_2 = \frac{P_1 V_1}{P_2} = \frac{278\,060 \cdot 2}{101\,300} \approx 5,5 \text{ cm}^3$$

SVAR: $5,5 \text{ cm}^3$