

Solution

$$\textcircled{1} P_2 = \frac{790 \times 473,15 \text{ K}}{298,15 \text{ K}} = 1,253 \text{ mmHg}$$

$$\textcircled{2} T_2 = \frac{20^\circ \times 9 \text{ atm}}{3 \text{ atm}} \rightarrow \frac{293 \text{ K} \times 9 \text{ atm}}{3 \text{ atm}} = 879 \text{ K}$$

$$\textcircled{3} P_2 = \frac{790 \text{ mmHg} \times 200^\circ}{25^\circ} \rightarrow \frac{790 \times 473 \text{ K}}{298 \text{ K}} = 1,2539 \text{ mmHg}$$