

12.68

Fixed amount of air

$$P_i = 1 \text{ atm}, \phi_i = 0.1, T_i = 52^\circ\text{C}$$

$$P_f = 1 \text{ atm}, T_f = 15^\circ\text{C}$$

$\omega = \frac{m_v}{m_a}$. If there is no condensation, ω cannot change

From psychrometric chart, $\omega_i = 0.0085$

For $T_f = 15^\circ\text{C}$ and $\omega = 0.0085$, $\phi_f = 0.80$, so no
condensation occurs.
