# An ideal gas

**An ideal gas has a gas constant $R = 0.3$ $kJ/kg \cdot K$ and a constant volume specific heat $c_v = 0.7 kJ/kg \cdot K$. If the gas has a temperature change of 100 °C, what is the change in $P \cdot v$ in $kJ/kg$**

Answer: 30.

Explanation: The change in P-v is given by the following formula: $\Delta(P \cdot V) = R \cdot \Delta T = 30kJ$