



# THERMOQUIZ

## An ideal gas

An ideal gas has a gas constant  $R = 0.3 \text{ kJ/kg} \cdot \text{K}$  and a constant volume specific heat  $c_v = 0.7 \text{ kJ/kg} \cdot \text{K}$ . If the gas has a temperature change of  $100^\circ\text{C}$ , what is the change in internal energy in  $\text{kJ/kg}$ ?

Answer: 70.

Explanation: The change in internal energy is given by:  $\Delta u = c_v \cdot \Delta T = 70 \text{ kJ/kg}$