

The temperature of the system decreases in:

- a) Adiabatic compression
- b) Isothermal compression
- c) Isothermal expansion
- d) Adiabatic expansion

Solution:

Explanation:

As it's a generalize question, we can assume the system is ideal gas. So, if temperature decreases ΔU is negative. In adiabatic process, $q=0$. Hence, w has to be negative. Hence, expansion will occur.