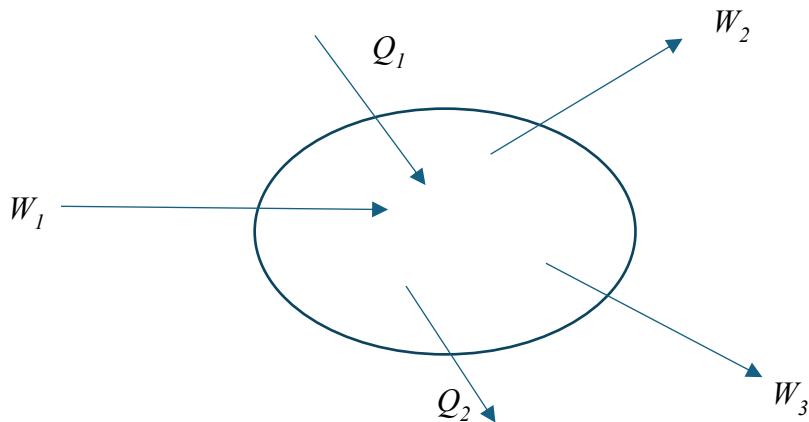


- 14** Consider the following diagram involving heat transfer  $Q$  and work  $W$  done for a system.



If  $\Delta U$  is the change in the internal energy of the system, which of the following equations is correct?

- A**  $\Delta U = (Q_1 - Q_2) + (W_2 + W_3 - W_1)$
- B**  $\Delta U = (Q_1 - Q_2) + (W_1 - W_2 - W_3)$
- C**  $\Delta U = (Q_1 + Q_2) + (W_2 + W_3 - W_1)$
- D**  $\Delta U = (Q_1 + Q_2) + (W_1 - W_2 - W_3)$