

8. The figure shows a reversible cycle through which 1.00 mol of a monatomic ideal gas is taken. Volume $V_c = 8.00V_b$. Process bc is an adiabatic expansion, with $p_b = 10.0$ atm and $V_b = 1.00 \times 10^{-3} \text{ m}^3$. For the cycle, find

- (a) the energy added to the gas as heat, [3 marks]
- (b) the energy leaving the gas as heat, [3 marks]
- (c) the net work done by the gas, and [1 mark]
- (d) the efficiency of the cycle. [1 mark]

