14 The first law of thermodynamics states that ΔU, the increase in internal energy of a system, is related to q, the heat supplied to it, and w, the work done on it, by the equation

$$\Delta U = q + w$$

What are the signs of ΔU, q and w for a constant mass of ideal gas which is cooled at constant pressure?

	ΔU	q	w
A	negative	positive	negative
B	negative	negative	positive
C	positive	negative	positive
D	positive	positive	positive