

17 A 20 W filament lamp has been operating normally for an hour so that its temperature is constant.

When the first law of thermodynamics is used to quantitatively describe the filament of the lamp after this time, which row correctly describes the application of the first law?

	rate of increase of internal energy/W	rate of heating the filament/W	rate of doing work on filament/W
A	+20	+20	0
B	+20	0	+20
C	0	+20	-20
D	0	-20	+20