16 A spring is initially neither compressed nor extended.

A force can be applied to this spring so that it is either compressed to a shorter length or extended to a longer length.

What is the change in the elastic potential energy in the spring when it is extended and when it is compressed?

	change in the elastic potential energy	
	spring is extended	spring is compressed
A	decreases	decreases
B	decreases	increases
C	increases	decreases
D	increases	increases

17 A sample of gas is sealed in a cylinder by a piston. The frictionless piston is free to move, so that the pressure of the gas remains constant at 1.80×10^5 Pa.

The gas initially occupies a volume of 2.40×10^{-4} m^3.

The gas now does 14.4 J of work.

What is the volume of the gas after doing this work?

A 0.80×10^{-4} m^3

B 1.60×10^{-4} m^3

C 3.20×10^{-4} m^3

D 4.00×10^{-4} m^3