

20 A wire is stretched by applying increasing values of force F . For each value of force applied, the extension x is recorded. A force–extension graph is plotted from the data obtained.

Which statement about the area under the graph **must** be correct?

- A** It can be calculated as $\frac{1}{2}Fx$.
- B** It is the elastic potential energy stored in the stretched sample.
- C** It is the work done in stretching the sample.
- D** It would be the same for any wire of the same material.