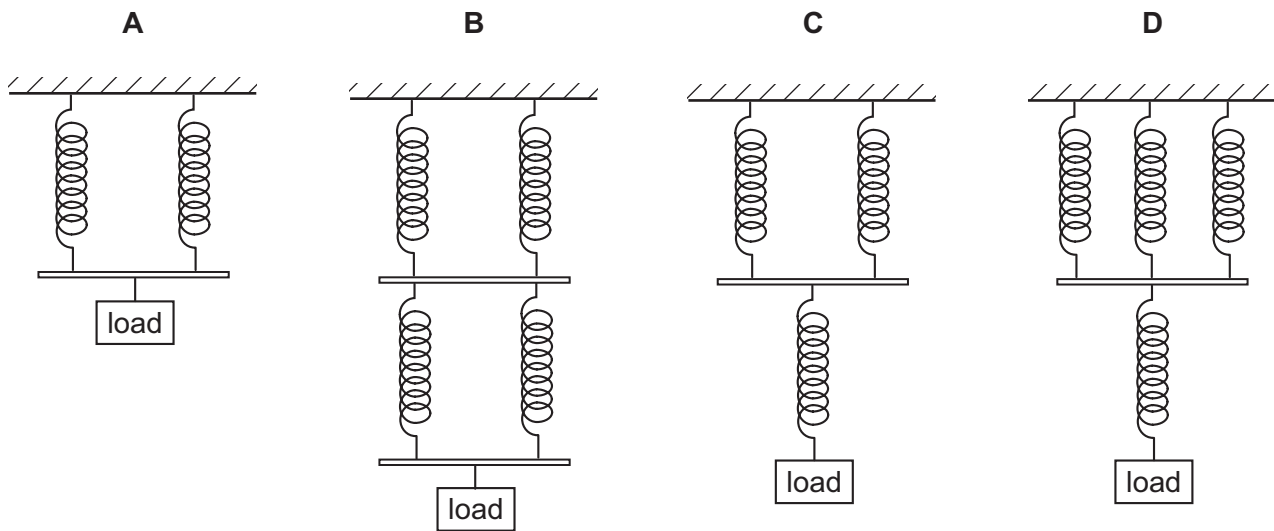
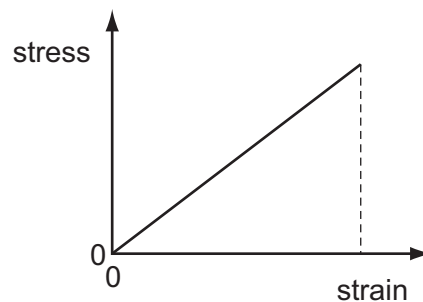
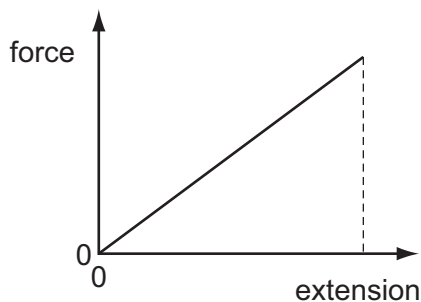


- 21 A number of similar springs, each having the same spring constant, are joined in four arrangements. The same load is applied to each.

Which arrangement gives the greatest extension?



- 22 The graphs show how force varies with extension and stress varies with strain for the loading of a metal wire.



The Young modulus for this wire is equal to

- A the gradient of the force-extension graph.
 - B the area between the force-extension graph and the extension axis.
 - C the gradient of the stress-strain graph.
 - D the area between the stress-strain graph and the strain axis.
- 23 For a wire, Hooke's law is obeyed for a tension F and extension x . The Young modulus for the material of the wire is E .

Which expression represents the elastic strain energy stored in the wire?

- A $\frac{1}{2} Ex$
- B Ex
- C $\frac{1}{2} Fx$
- D Fx