

21 A wire has an unstretched length of 2.00 m.

A stress of $1.6 \times 10^5 \text{ Pa}$ is applied to the wire, and the new length of the wire is 2.10 m.

The wire obeys Hooke's law.

What is the Young modulus of the wire?

- A** $8.0 \times 10^3 \text{ Pa}$ **B** $7.8 \times 10^4 \text{ Pa}$ **C** $1.5 \times 10^5 \text{ Pa}$ **D** $3.2 \times 10^6 \text{ Pa}$