Answer on 40289, Physics, Mechanics | Kinematics | Dynamics
Question: A wire of cross-sectional area of $6{\cdot}10^{-5}$ m2 and length 50cm stretches by 0.2mm under a load of 3000N. Calculate the Youngs modulus for the wire
Solution. Young's modulus is:

$$E = \frac{F/S}{\Delta l/l} = \frac{3000/(6 \cdot 10^{-5})}{0.2 \cdot 10^{-3}/50} = 12.5 \cdot 10^{11} Pa$$