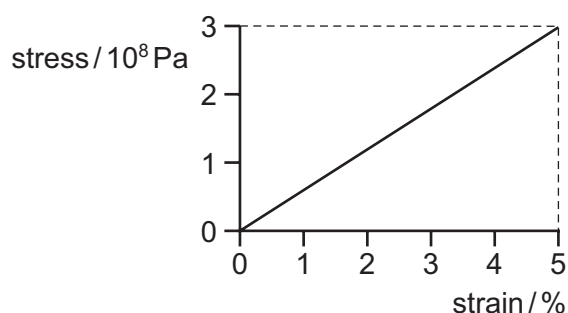
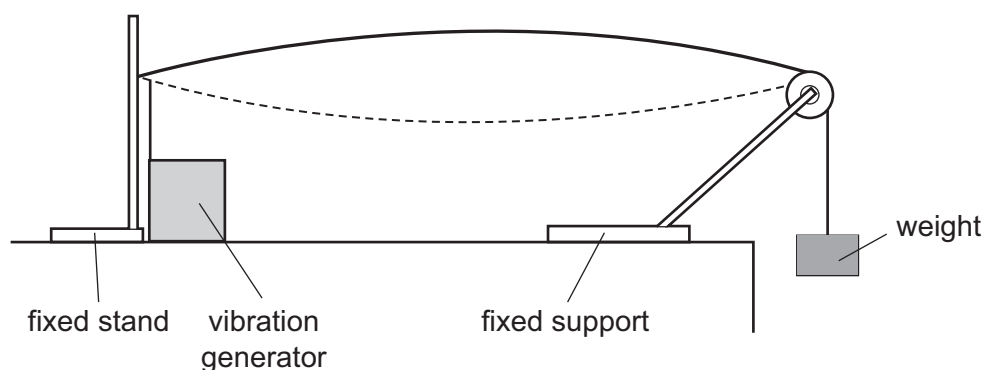


- 21 In stress-strain experiments on metal wires, the stress axis is often marked in units of 10^8 Pa and the strain axis is marked as a percentage. This is shown for a particular wire in the diagram.



What is the value of the Young modulus for the material of the wire?

- A 6.0×10^7 Pa B 7.5×10^8 Pa C 1.5×10^9 Pa D 6.0×10^9 Pa
- 22 The diagram shows a steel wire clamped at one end and tensioned at the other by a weight hung over a pulley.



A vibration generator is attached to the wire near the clamped end. A stationary wave with one loop is produced. The frequency of the vibration generator is f .

Which frequency should be used to produce a stationary wave with two loops?

- A $\frac{f}{4}$ B $\frac{f}{2}$ C $2f$ D $4f$

Space for working