

- 21 A wire stretches 8 mm under a load of 60 N.

A second wire of the same material, with half the diameter and a quarter of the original length of the first wire, is stretched by the same load.

Assuming that Hooke's law is obeyed, what is the extension of this wire?

- A 1 mm                      B 4 mm                      C 8 mm                      D 16 mm

- 22 Polarisation is a phenomenon associated with a certain type of wave.

Which condition **must** be fulfilled if a wave is to be polarised?

- A It must be a light wave.  
B It must be a longitudinal wave.  
C It must be a radio wave.  
D It must be a transverse wave.

- 23 A sound wave has displacement  $y$  at distance  $x$  from its source at time  $t$ .

Which graph correctly shows the amplitude  $a$  and the wavelength  $\lambda$  of the wave?

