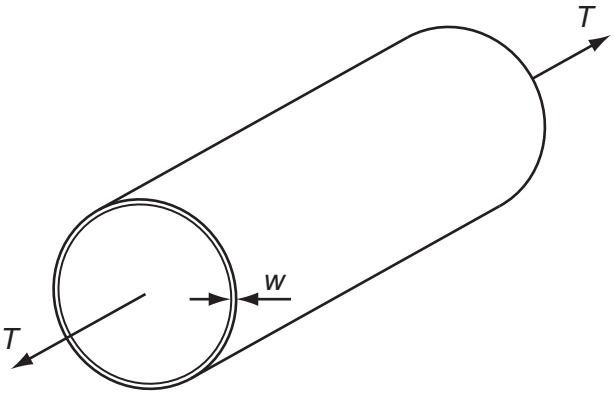
23 The diagram represents a steel tube with wall thickness *w* which is small in comparison with the diameter of the tube.

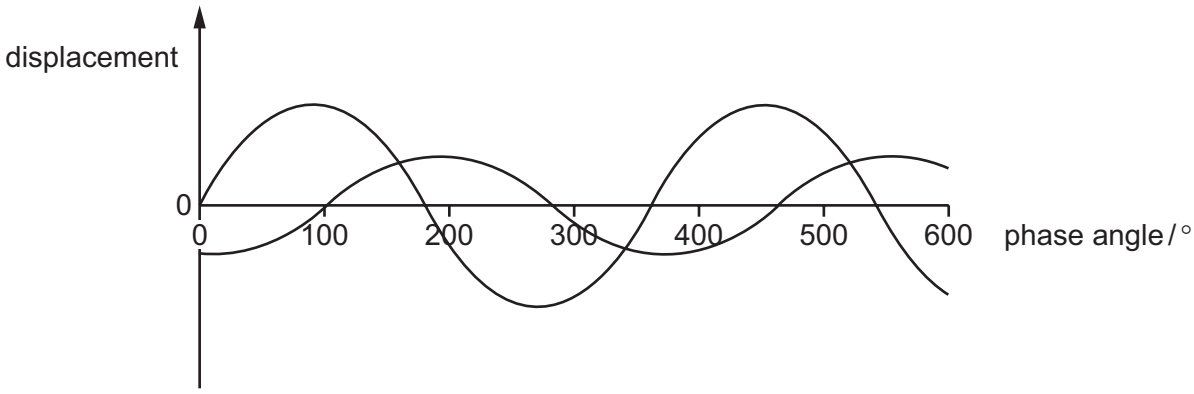


The tube is under tension, caused by a force *T*, parallel to the axis of the tube. To reduce the stress in the material of the tube, it is proposed to thicken the wall.

The tube diameter and the tension being constant, which wall thickness gives half the stress?

A $\frac{w}{2}$ **B** $\sqrt{2}\,w$ **C** $2w$ **D** $4w$

24 Two light waves of the same frequency are represented by the diagram.



What could be the phase difference between the two waves?

A 150° **B** 220° **C** 260° **D** 330°

25 A sound wave has a speed of $330\,\mathrm{m\,s^{-1}}$ and a frequency of 50 Hz.

What is a possible distance between two points on the wave that have a phase difference of 60°?

A 0.03 m **B** 1.1 m **C** 2.2 m **D** 6.6 m