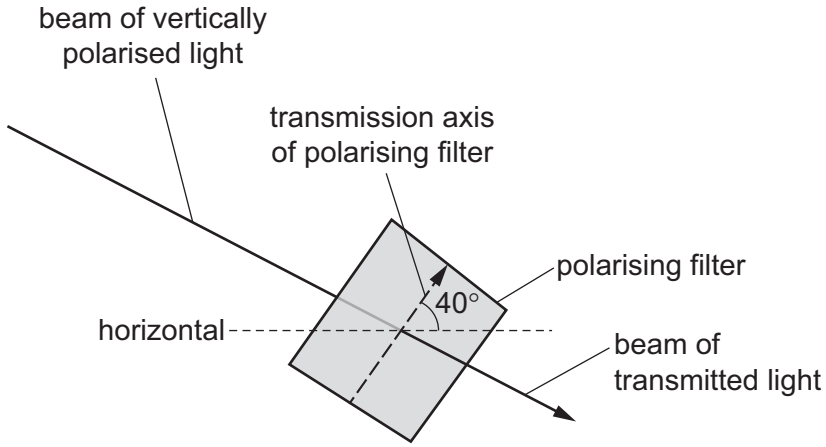
24 A vertically polarised beam of light is incident normally on a polarising filter. The transmission axis of the filter is at an angle of 40° to the horizontal.



What is the ratio $\frac{\text{amplitude of transmitted beam}}{\text{amplitude of incident beam}}$?

A 0.41 **B** 0.59 **C** 0.64 **D** 0.77

25 Two progressive waves meet at a point.

Which condition must be met for superposition of the waves to occur?

A The waves must be coherent.

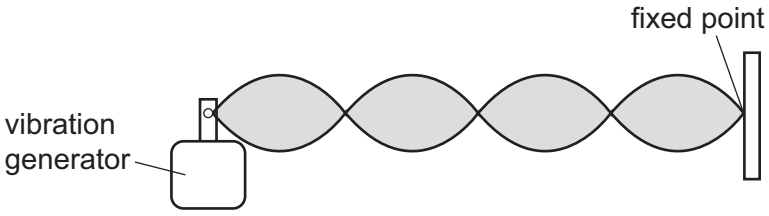
B The waves must be of the same type.

C The waves must be travelling in opposite directions.

D The waves must meet in phase.

26 A string is stretched between a vibration generator and a fixed point.

When the vibration generator is vibrating at a frequency *f*, a stationary wave with five nodes is created on the stretched string, as shown. There is a node at the end of the string that is attached to the vibration generator.



The frequency of vibration of the vibration generator is slowly increased.

What is the next frequency that produces a stationary wave on the string?

A 1.25*f* **B** 1.50*f* **C** 1.75*f* **D** 2.00*f*