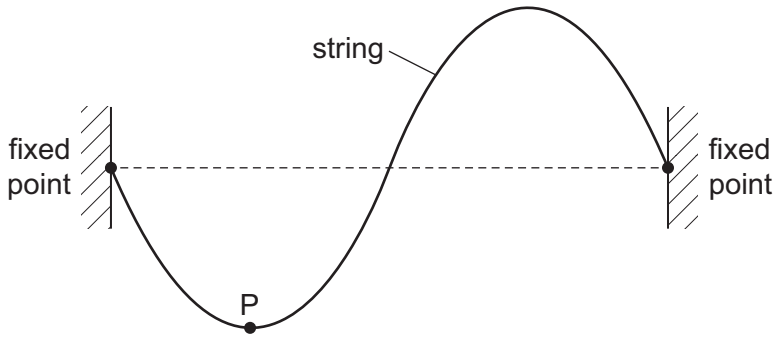
26 A stationary wave is formed on a stretched string. The diagram illustrates the string at an instant of time when the displacement of the string is at its maximum.



The frequency of the wave is 250 Hz. Point P on the string has a vertical displacement of –1.0 mm.

What will be the vertical displacement of the point P after a time of 5 ms?

A –1.0 mm **B** zero **C** +0.5 mm **D** +1.0 mm

27 Observable interference fringes are produced using light from a double slit. The intensity of the light emerging from each slit is initially the same.

The intensity of the light emerging from one of the slits is now reduced.

How does this affect the interference pattern?

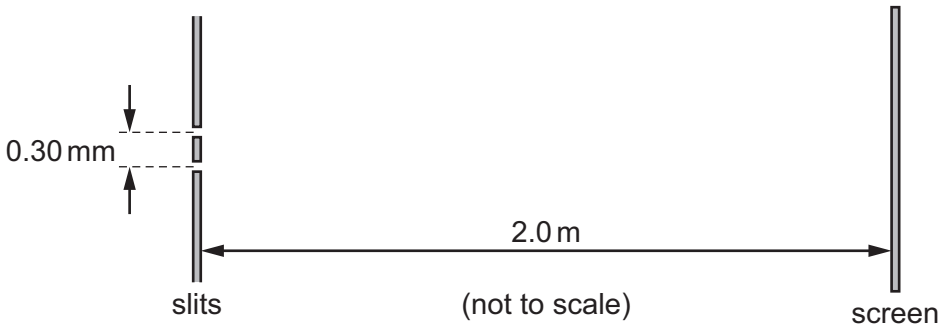
A The bright fringes and the dark fringes all become brighter.

B The bright fringes and the dark fringes all become darker.

C The bright fringes become brighter and the dark fringes become darker.

D The bright fringes become darker and the dark fringes become brighter.

28 Monochromatic light of wavelength 450 nm passes through two parallel slits 0.30 mm apart. Bright fringes are observed on a screen 2.0 m away.



How far apart are the bright fringes on the screen?

A 1.3 mm **B** 1.5 mm **C** 3.0 mm **D** 6.0 mm