

- 31** Light of a single wavelength is incident normally on a double slit. Interference fringes are observed on a screen.

The distance from the double slit to the screen is 0.60 m and the fringe separation is 1.8 mm.

The distance from the double slit to the screen increases by 0.90 m.

What is the new fringe separation?

- A** 1.2 mm **B** 2.7 mm **C** 4.5 mm **D** 5.4 mm

- 31** Light of a single frequency from two coherent sources interferes to produce a pattern of bright and dark fringes on a screen.

Which change results in a larger fringe separation?

- A** increasing the distance between the sources and the screen
B increasing the distance between the two sources
C increasing the frequency of the light
D increasing the intensity of the light

- 27** Light waves are emitted from two sources.

What is a necessary condition for observable interference fringes to be produced?

- A** The waves must be polarised.
B The waves must **not** be polarised.
C The waves must be coherent.
D The waves must have equal amplitudes.