

- 29** An experiment is carried out to demonstrate double-slit interference using light of wavelength 500 nm. The distance between bright fringes in the interference pattern is 5 mm.

What are possible values for the distance between the slits and the screen, and the slit separation?

	slit–screen distance	slit separation
<b>A</b>	50 cm	0.5 mm
<b>B</b>	50 cm	5 mm
<b>C</b>	5 m	0.5 mm
<b>D</b>	5 m	5 mm

- 30** Light of a single frequency is incident on a diffraction grating. Seven bright spots are observed on a screen.

Which change will result in an increase in the number of bright spots observed?

- A** Increase the distance between the grating and the screen.
- B** Increase the frequency of the incident light.
- C** Increase the intensity of the incident light.
- D** Increase the number of lines per metre in the grating.