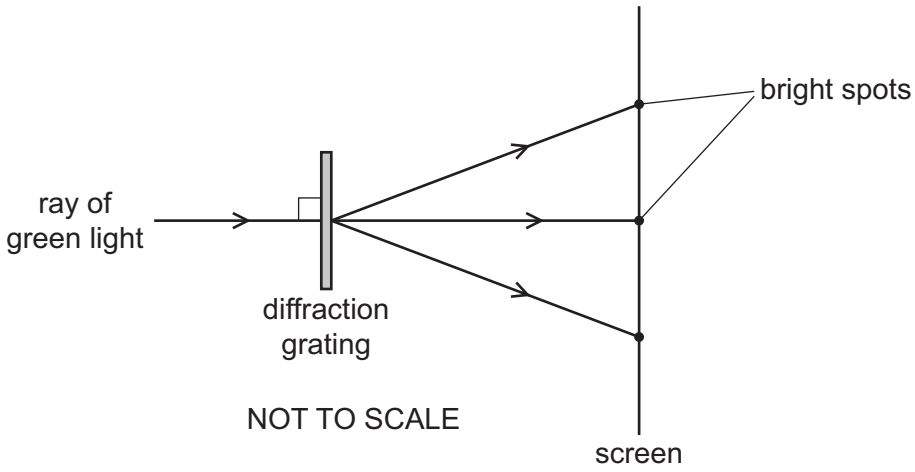
29 Interference fringes are produced on a screen by double-slit interference using light of wavelength 600 nm. The fringe separation is 4.0 mm and the separation of the slits is 0.60 mm.

What is the distance between the double slit and the screen?

A 0.25 m **B** 0.40 m **C** 2.5 m **D** 4.0 m

30 A ray of green light is incident normally on a diffraction grating. Several bright spots are produced on a screen on the other side of the grating, as shown.



Which pair of changes could result in bright spots at exactly the same angles as previously?

A Use blue light and increase the distance between the grating and the screen.

B Use blue light and increase the number of lines per unit length in the grating.

C Use red light and increase the distance between the grating and the screen.

D Use red light and increase the number of lines per unit length in the grating.