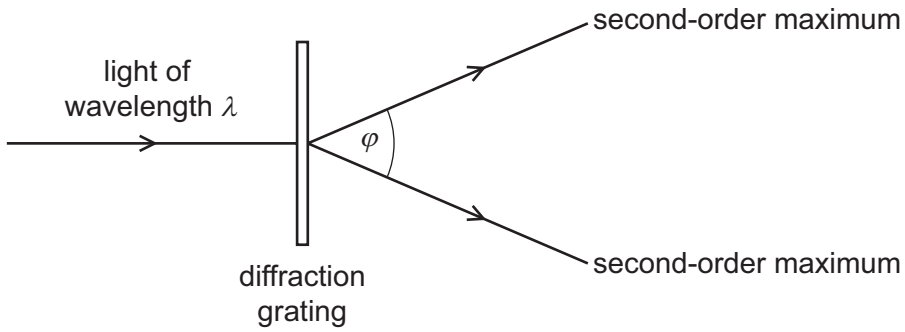
28 The table shows four possible combinations of values for the laser wavelength, slit separation and slit-screen distance in a two-slit interference experiment to show the interference of visible light on a white screen.

Which combination will result in visible fringes being observed?

	laser wavelength / nm	slit separation / mm	slit-screen distance / m
A	200	0.10	5.0
B	200	100	1.0
C	600	0.10	5.0
D	600	100	1.0

29 Light of wavelength λ is incident normally on a diffraction grating, as shown.



The angle between the two second-order maxima is φ.

Which expression gives the spacing of the lines on the diffraction grating?

A $\dfrac{\lambda}{\sin\varphi}$ **B** $\dfrac{\lambda}{\sin(\varphi/2)}$ **C** $\dfrac{2\lambda}{\sin\varphi}$ **D** $\dfrac{2\lambda}{\sin(\varphi/2)}$