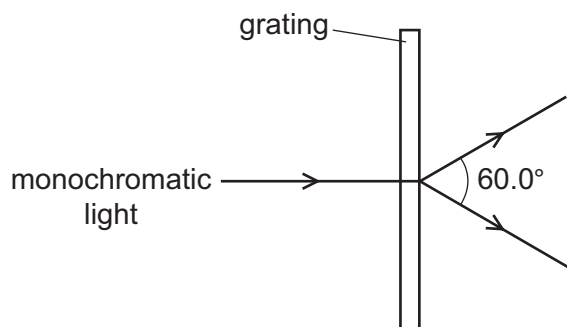


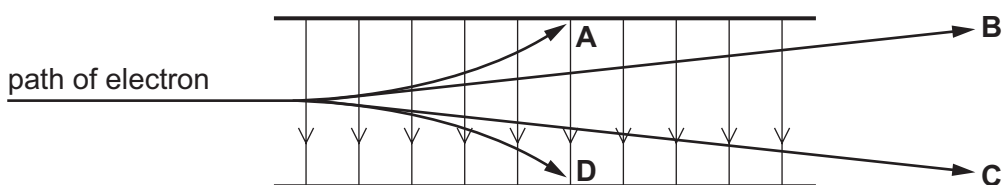
- 29** A diffraction grating is used to measure the wavelength of monochromatic light.

The spacing of the slits in the grating is $1.15 \times 10^{-6} \text{ m}$. The angle between the first order diffraction maxima is 60.0° , as shown in the diagram.



What is the wavelength of the light?

- A** 288 nm **B** 498 nm **C** 575 nm **D** 996 nm
- 30** Which path shows a possible movement of an electron in the electric field shown?



- 31** The diagram shows an electric field pattern caused by two positive and two negative point charges of equal magnitude placed at the four corners of a square.

In which direction does the force act on an electron at point X?

