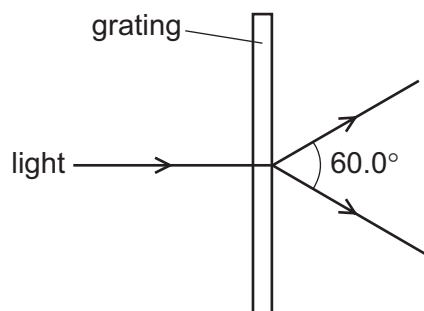


- 29 A diffraction grating is used to measure the wavelength of light.

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.



What is the wavelength of the light?

- A 288 nm B 498 nm C 575 nm D 996 nm
- 30 What could **not** be used to create an electric current?
- A alpha-particles
B beta-particles
C neutrons
D protons
- 31 What is the definition of the potential difference (p.d.) across a component?
- A the energy transferred per unit charge
B the energy transferred per unit current
C the power transferred per unit charge
D the power transferred per unit current
- 32 The resistance of a filament lamp increases as the current in it increases.
- What is the reason for this?
- A The charge of each charge carrier increases.
B The potential difference across the filament decreases.
C The power dissipated by the filament decreases.
D The temperature of the filament increases.