29 Monochromatic light of wavelength 5.30×10^{-7} m is incident normally on a diffraction grating. The first order maximum is observed at an angle of 15.4° to the direction of the incident light.

What is the angle between the first and second order diffraction maxima?

A 7.6° **B** 15.4° **C** 16.7° **D** 32.0°

30 Two conducting layers of a liquid crystal display of a calculator are $8\,\mu$m apart. A 1.5 V cell is connected across the conducting layers when the calculator is switched on.

What is the electric field strength between the layers?

A $1.2 \times 10^{-5}\,\text{V}\,\text{m}^{-1}$

B $0.19\,\text{V}\,\text{m}^{-1}$

C $12\,\text{V}\,\text{m}^{-1}$

D $1.9 \times 10^{5}\,\text{V}\,\text{m}^{-1}$

Space for working