

- 28** A student carries out a double-slit experiment using a laser emitting red light of wavelength of 680 nm. The light is incident normally on a double slit.

The diagram shows part of the pattern of bright fringes visible on a screen at a distance of 2.4 m from the slits. The distance across five bright fringes is measured as 34 mm.



What is the slit separation?

- A** $8.5 \times 10^{-3} \text{ m}$ **B** $2.4 \times 10^{-4} \text{ m}$ **C** $1.9 \times 10^{-4} \text{ m}$ **D** $4.8 \times 10^{-5} \text{ m}$