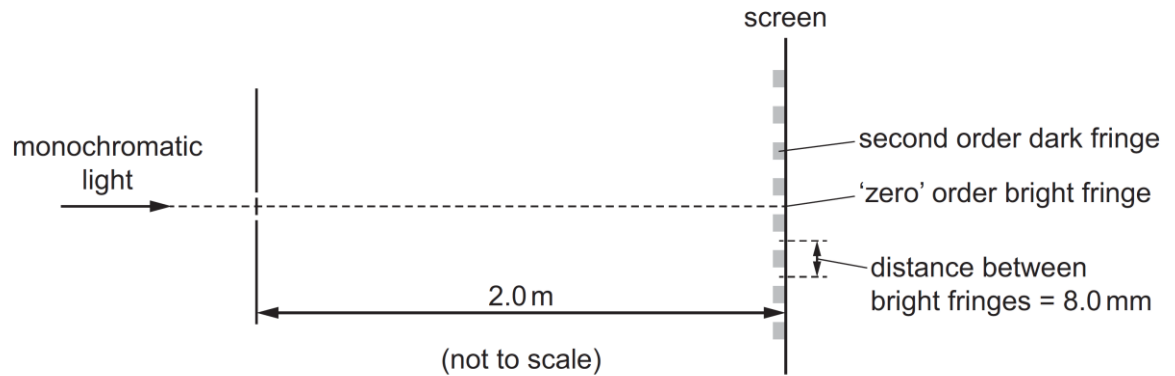


- 19** Monochromatic light is incident on a pair of narrow slits a distance of 0.1 mm apart. A series of bright and dark fringes are observed on a screen a distance of 2.0 m away. The distance between adjacent bright fringes is 8.0 mm.



What is the path difference between the light waves from the two slits that meet at the second order dark fringe?

- A** $2.0 \times 10^{-7} \text{ m}$
- B** $4.0 \times 10^{-7} \text{ m}$
- C** $6.0 \times 10^{-7} \text{ m}$
- D** $8.0 \times 10^{-7} \text{ m}$