

1. A double-slit experiment is performed with blue-green light of wavelength 512 nm. The slits are 1.20 mm apart and the screen is 5.40 m from the slits. How far apart are the bright fringes on the screen?

Answer: 2.3 mm

2. The distance between the first and tenth bright fringes is 18 mm on a screen that is 50 cm from a double-slit with separation 0.15 mm. What is the wavelength of the light?

Answer: 600 nm

3. In a double-slit experiment, the distance between the slits is 5.22 mm and the slits are 1.36 m from the screen. Two interference patterns appear on the screen, one due to light of wavelength 480 nm and the other due to light of wavelength 612 nm. Find the separation on the screen between the third-order bright fringes of the two different patterns.