

Physics 214

Quiz 2-1

- a) A slit of width a is illuminated with blue light with wavelength, $\lambda = 450$ nm. The first diffraction minimum falls at $\theta = 6^\circ$. Determine the slit width a .
- b) Green light ($\lambda = 520$ nm) passes through a circular pinhole in an otherwise opaque screen. What diameter hole will cause the first diffraction minimum to fall 1° away from the central bright spot?
- c) Light of an unknown wavelength falls on two tiny pinholes. The first pinhole has twice the diameter of the second. If the first pinhole's first diffraction minimum falls at 4° , what is the angle of the first diffraction minimum for the second pinhole?