Physics 214 **Quiz 2-2**

a) A slit of width *a* is illuminated with blue light with wavelength, $\lambda = 470$ nm. The first diffraction minimum falls at $\theta = 8°$. Determine the slit width *a*.

b) Green light ($\lambda = 550$ 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 8°, what is the angle of the first diffraction minimum for the second pinhole?