

Assignment #1:

Problem #1: The Wavelength Calculator

Your program should print the wavelength of visible light in a double slit diffraction experiment. The values of m , θ , and d should be given as input. The output should be:

- The numeric value of the wavelength
- The color of the light

The wavelength range for different color:

Color	Wavelength (nm)
 violet	380–450
 blue	450–485
 cyan	485–500
 green	500–565
 yellow	565–590
 orange	590–625
 red	625–750

Please note the following:

- λ should be in nm (10^{-9})
- d and a 's are in μm (10^{-6})

Problem #2

If a diffraction grating produces a third-order bright spot for green light (of wavelength 530 nm) at 65.0° from the central maximum, at what angle will the second-order bright spot be for red light (of wavelength 700 nm)?