

1) The light of two independent sources ($\lambda=800\text{nm}$ and $\lambda=400\text{nm}$) shines onto a diffraction grating ($N=10$, $d=0.1\text{mm}$) and produces a diffraction pattern on a screen 3m away.
[diffraction grating = optical grid = N -slit]

- At which distance from the center do we expect the 0^{th} , 1^{st} , 2^{nd} fringe (maximum in light) for each of the light rays?