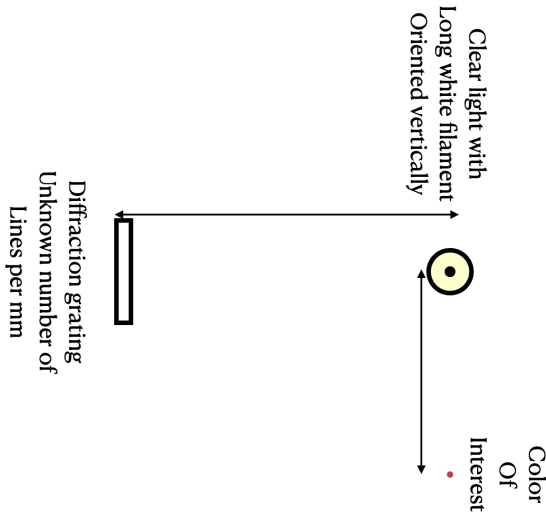


Diffraction Grating Problem

Step 1: Below is an overhead view of a diffraction set up. Label the distance from the diffraction grating to the white light filament, the distance to the color you are focusing on, and the frequency of the light you are looking at in the diffraction pattern



Step 2: Take the frequency of light you are focusing on and figure out the wavelength of the light in nanometers. Show your calculations neatly below

Step 3: Use your diffraction equations to figure out the number of lines per mm for the diffraction grating that is being used in your problem. Show all the steps below. The diffraction equations involving angle will give you a more accurate result, but either method should get you close to the answer expected by your program. Enter your answers into the program to check that you did everything correctly