

Name: \_\_\_\_\_ Lab Section: \_\_\_\_\_ Date: \_\_\_\_\_

### Prelab: Diffraction Grating

**Instructions:** Prepare for this lab activity by answering the questions below. Note that this is a **PreLab**. It must be turned in at the start of the lab period. Time cannot be given in lab to perform PreLab activities. After the start of lab activities, PreLabs cannot be accepted. Points will be taken off if your work is not neat and well organized. **To receive credit you must show your work.**

1. (12 points) You are using a grating with 1000 lines per millimeter; the angle for the first order maxima is  $\theta = 15^\circ$ .

a. What is the grating spacing?

b. Find the wavelength of the light.

c. Find the angle for the second order maxima.

2. (3 points) What cautions are given in this lab?