

Wavelength of Light and Spectroscopy Answer Sheet

Due at the end of lab

Turn in Just This Page

Name: _____ Date: _____

Partner(s): _____

Diffraction grating: _____ lines per mm

Distance between adjacent slits: $D =$ _____ nm

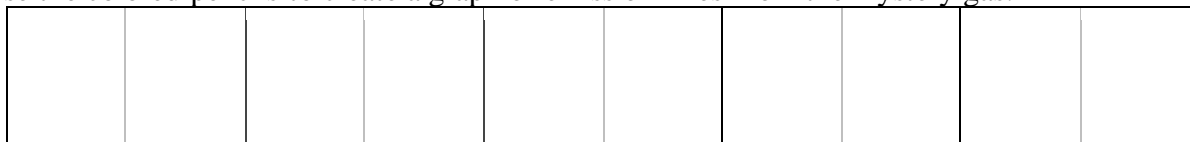
The angle: $\theta = \frac{|\theta_{right} - \theta_{left}|}{2}$

Wavelength: $\lambda = D \times \sin\theta$

Emission lines of mystery gas:

Color	θ_{right}	θ_{left}	θ	λ (nm)

Use the colored pencils to create a graph of emission lines from the mystery gas:



300nm 350nm 400nm 450nm 500nm 550nm 600nm 650nm 700nm 750nm 800nm
Wavelength

Comparing this emission spectrum with the given spectra displayed in the Lab Room, I infer that the gas is:_____.

Justify your answer.

Tungsten Desk Lamp

Color	θ_{right}	θ_{left}	θ	λ

What kind of spectrum is this? Circle your answer.

continuous emission absorption

What's the difference between the spectrum of the lamp and the spectrum of the Sun displayed in the Lab Room?