

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Partner: \_\_\_\_\_

### Index of Refraction of Glass

Submit this worksheet along with a second sheet that contains both graphs and all linest results. Your nicely formatted Excel worksheet should be placed in my inbox on \\files (\\files\Inbox\Physics\Pogo\OpticsLab; only one Excel document per group; it should be titled “Lenses-Smith&Jones.xls”), assuming that you and your partner are named Smith and Jones, respectively.

quantity	units	Converging		Diverging	
		value	uncertainty	value	uncertainty
slope of graph	mm				
Pin to pin distance of spherometer ( $L$ )	mm				
Focal length ( $f$ )	mm				
Spherometer offset for 1 <sup>st</sup> surface ( $h_1$ ). May be negative.	mm				
Spherometer offset for 2 <sup>nd</sup> surface ( $h_2$ ). May be negative.	mm				
Radius of 1 <sup>st</sup> surface ( $R_1$ ). May be negative.	mm				
Radius of 2 <sup>nd</sup> surface ( $R_2$ ). May be negative.	mm				
index of refraction ( $n$ )	-				

Focal length of convex lens as measured by a distant object (include units and uncertainty):

In the space below, comment on your results. Do your measurements of the index of refraction agree with the typical values for glass? If not, why not?