

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

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

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

**Worksheet 3: Lenses**

<b><i>Part II: Distant Object (Exit Sign)</i></b>	
<i>Quantity</i>	<i>Value</i>
$f$ (mm)	$\pm$
<b><i>Part III: Varying Positions</i></b>	
Object height (direct measurement) $h_o$ (cm)	$\pm$
Plot 1: slope of $(d_o \cdot d_i)$ vs $(d_o + d_i)$	$\pm$ ( )
Plot 1: intercept of $(d_o \cdot d_i)$ vs $(d_o + d_i)$	$\pm$ ( )
Plot 1: $f$ (mm)	$\pm$
Plot 2: slope of $(h_i)$ vs $(-d_i/d_o)$	$\pm$
Plot 2: Object height $h_o$ (cm)	$\pm$

You now have two measurements of  $f$  and two measurements of  $h_o$ , none of which are perfect. Based on these, what do *you* think  $f$  and  $h_o$ , really are? Justify your answer, be quantitative, and include uncertainties.