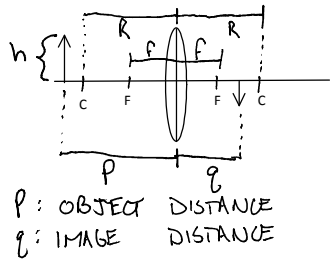


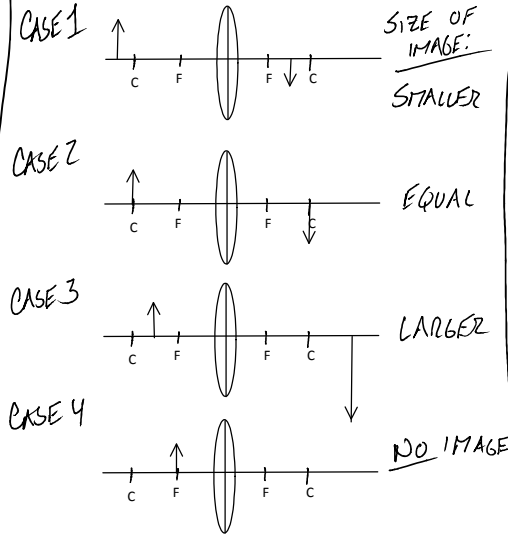
LAB 10: THIN LENS

DEFINITIONS: MIRROR: OPTICAL SYS. WHICH REFLECTS AN IMAGE  
 LENS: OPTICAL SYSTEM w/2 REFRACTING SURFACES



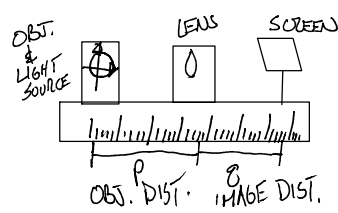
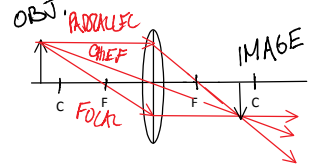
$p$ : OBJECT DISTANCE  
 $q$ : IMAGE DISTANCE

CONVERGING  $\rightarrow$  REAL IMAGES & INVERTED FOCAL LENGTH



THIN LENS EQ  

$$\frac{1}{f} = \frac{1}{p} + \frac{1}{q}$$

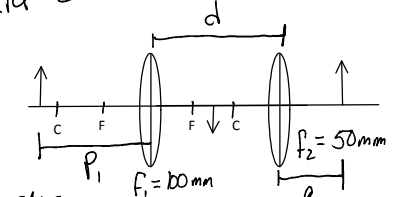


EXPERIMENT PART 1

MEASURE AND RECORD

- 1) IMAGE DISTANCE  $\rightarrow$  mm
- 2) OBJECT DISTANCE  $\rightarrow$  mm

PART 2



- TO CALC.  $q_2$
- 1)  $\frac{1}{f_1} = \frac{1}{p_1} + \frac{1}{q_1}$  FIND  $q_1$
  - 2)  $p_2 = d - q_1$  FIND  $p_2$
  - 3)  $\frac{1}{f_2} = \frac{1}{p_2} + \frac{1}{q_2}$  FIND  $q_2$

4) % DIFF  

$$\left| \frac{\text{MEAS.} - \text{CALC.}}{\text{CALC.}} \right| \times 100$$