Name:

1. Define the terms of the relationship  $\frac{1}{d_o} + \frac{1}{d_i} = \frac{1}{f}$  (Eq. 21.1) and state how each term is measured. (20 pts)

2. State the sign conventions for  $d_o$  and  $d_i$ . (20 pts)

3. What is the difference between a real image and a virtual image? (20 pts)

4. Define the terms of the relationship  $M = \frac{h_i}{h_o}$  and state the sign conventions. (20 pts)

5. What does optical axis mean? (10 pts)

6. What two methods will be used to calculate the focal length of a converging lens? (10 pts)