

$$\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$$

$$\frac{1}{10} = \frac{1}{d_i} + \frac{1}{25}$$

$$d_i = 16.67 \text{ cm}$$

$$\frac{h_i}{h_o} = -\frac{d_i}{d_o}$$

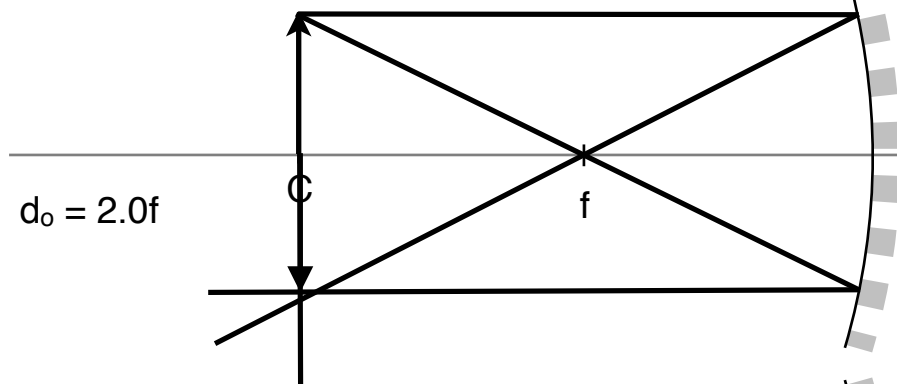
$$\frac{h_i}{5} = -\frac{16.67}{25}$$

$$h_i = -3.33 \text{ cm}$$

$$\text{mag} = \frac{h_i}{h_o}$$

$$\text{mag} = -\frac{3.33}{5}$$

$$\text{mag} = -0.667$$



$$\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$$

$$\frac{1}{10} = \frac{1}{d_i} + \frac{1}{20}$$

$$d_i = 20 \text{ cm}$$

$$\frac{h_i}{h_o} = -\frac{d_i}{d_o}$$

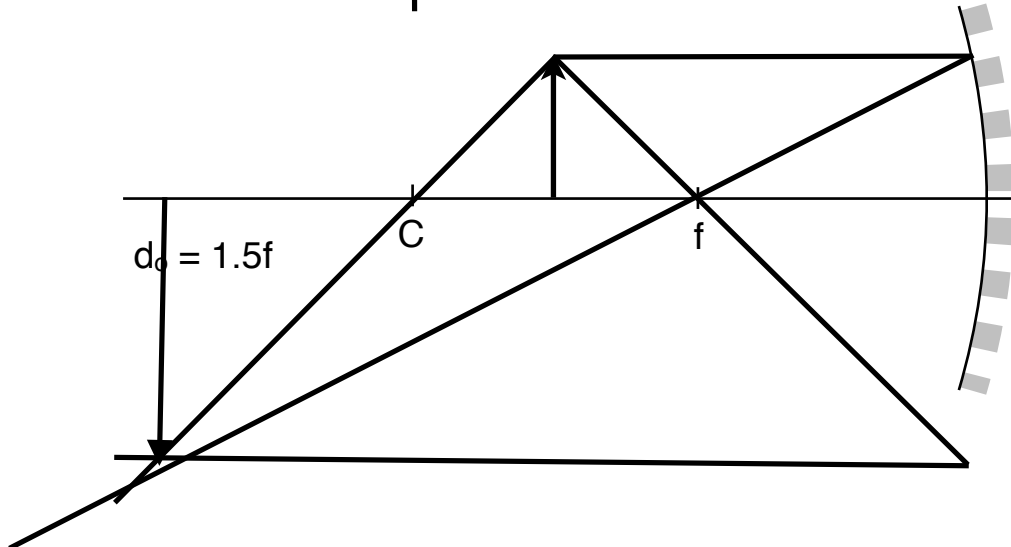
$$\frac{h_i}{5} = -\frac{20}{20}$$

$$h_i = -5 \text{ cm}$$

$$\text{mag} = \frac{h_i}{h_o}$$

$$\text{mag} = -\frac{5}{5}$$

$$\text{mag} = -1$$



$$\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$$

$$\frac{1}{10} = \frac{1}{d_i} + \frac{1}{15}$$

$$d_i = 30 \text{ cm}$$

$$\frac{h_i}{h_o} = -\frac{d_i}{d_o}$$

$$\frac{h_i}{5} = -\frac{30}{15}$$

$$h_i = -10 \text{ cm}$$

$$\text{mag} = \frac{h_i}{h_o}$$

$$\text{mag} = -\frac{10}{5}$$

$$\text{mag} = -2$$

