

55. **REASONING AND SOLUTION**

a. According to the thin-lens equation, we have

$$\frac{1}{d_i} = \frac{1}{f} - \frac{1}{d_o} = \frac{1}{-25 \text{ cm}} - \frac{1}{38 \text{ cm}} \quad \text{or} \quad d_i = \boxed{-15 \text{ cm}}$$

b. The image is **virtual** since the image distance is negative.