

Solutions

Each answer shows the steps, then the **result**.

2.1

- $\frac{1}{s_i} = \frac{1}{10} - \frac{1}{20} = \frac{1}{20} \Rightarrow s_i = 20 \text{ cm}$

2.2

- virtual

2.3

- $m = -\frac{s_i}{s_o} = -\frac{15}{30} = -0.5$

3.1 A

3.2 B

3.3

(a)

- $\frac{1}{s_i} = \frac{1}{8.0} - \frac{1}{24} = \frac{3-1}{24} = \frac{1}{12} \Rightarrow s_i = 12 \text{ cm}$

(b)

- real ($s_i > 0$)