

3.

$$h = 5.25$$

$$p_1 = 9.75$$

$$f_1 = 5.50$$

$$D = 15.25$$

$$f_2 = -4.75$$

$$\frac{1}{p_1} + \frac{1}{q_1} = \frac{1}{f_1}$$

$$\frac{1}{9.75} + \frac{1}{q_1} = \frac{1}{5.50}$$

$$q_1 = 12.62$$

$$p_2 = D - q_1 = 2.63$$

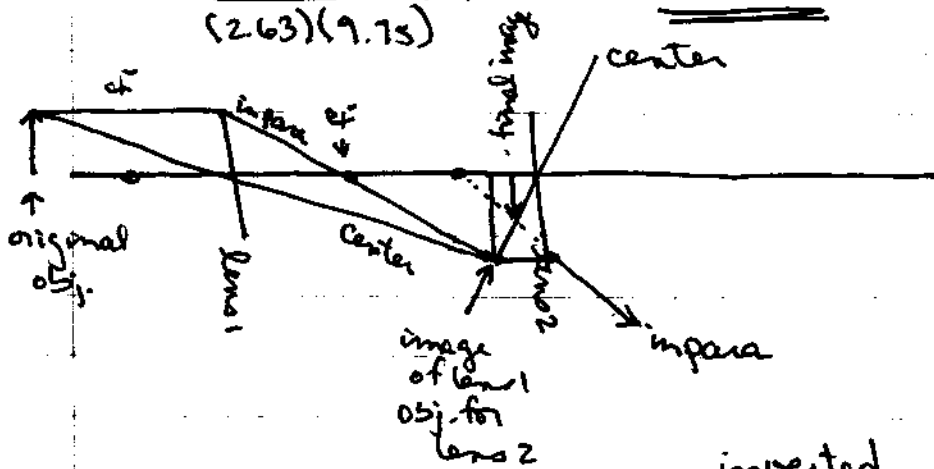
$$\frac{1}{p_2} + \frac{1}{q_2} = \frac{1}{f_2}$$

$$\frac{1}{2.63} + \frac{1}{q_2} = \frac{1}{-4.75}$$

$$q_2 = -1.69 \text{ cm}$$

↑
final image
location 1.69
to left (in front
of) lens 2

$$h = \frac{(1.69)(12.62)(5.25)}{(2.63)(9.75)} = \underline{\underline{4.37 \text{ cm}}} \text{ final height}$$



inverted
virtual