Worksheet for Exploration 35.4: What is Behind the Curtain?



A dragable source of light is shown along with an optical element that has been hidden behind a pink curtain **(position is given in meters)**. <u>Restart</u>.

a. What is behind the curtain? Do not read the rest of the question until you have answered this part.

b. AFTER you have determined what is behind the curtain, <u>remove the curtain</u> to see if you were right. Surprised?

c. Most students predict there is a converging lens with a focal length around 1m behind the curtain. Without removing the curtain, could you have known this prediction was incorrect?

d. Find the focal length of the individual lenses. Remember that when an object sits at the focal point of a lens, the light exits the lens parallel to the axis, and when light enters a lens parallel, it converges at the focal point. So, move the object to the focal point of the first lens and the light should converge at the focal point of the second lens.