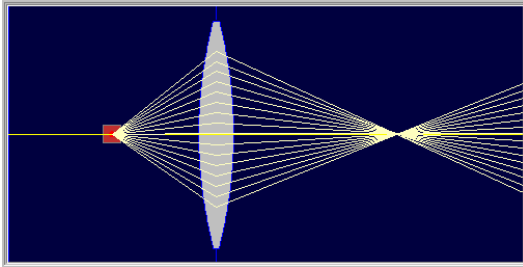


## Worksheet for Exploration 34.1: Lens and a Changing Index of Refraction



Light rays from a point source, initially in air, are shown incident on a lens. [Restart](#).

- a. How, if at all, would the path of the rays change if the source and lens were placed in another medium with an index of refraction of  $n = 1.2$ , which is less than the index of refraction of the lens? Draw what you expect the rays to look like in the new medium.

Make a prediction and then test your prediction by using the slider to increase the index of refraction of the surrounding medium. Was your prediction correct? Explain.

- b. Now, what happens if the index is increased to  $n = 2.0$ , so that it exceeds the index of refraction for the lens? Draw what you expect the rays to look like in the new medium.

Make a prediction and then check your prediction using the slider. Was your prediction correct? Explain.