

1. Imagine you are using an extended light source and a converging lens. Is it possible to form an image of the lens on the screen? If so, under what circumstances will the image form on the screen? If not, why not.
2. Choosing the shortest focal length converging lens available, set up the lens so that you form a real image on the screen. Set the image distance equal to the object distance. Sketch a simple diagram showing the paths of some rays.
3. If you were to remove the lens, would the image still be present?
4. If you were to replace the lens and remove the screen is the image still present?
5. If you put your eye at the location of the screen (with the screen removed), would you be able to see the image?
6. Remove the screen and place your eye where the screen was originally located. Can you clearly see the image? If your eye is moved closer to the lens, can you clearly see the image?
7. Suppose you were to place the lens closer than one focal length to the source. Can you form an image on the screen? Could you see the image with your eye alone?
8. Determine the location of the image by parallax. Where is the image located?
9. Suppose you used a diverging lens. Can you form an image on a screen? Can you see an image by eye?
10. Determine the location of this image by depth perception. Where is the image located?