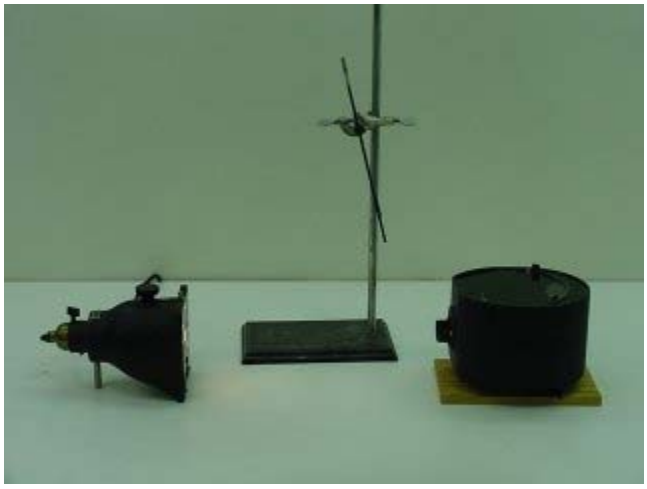
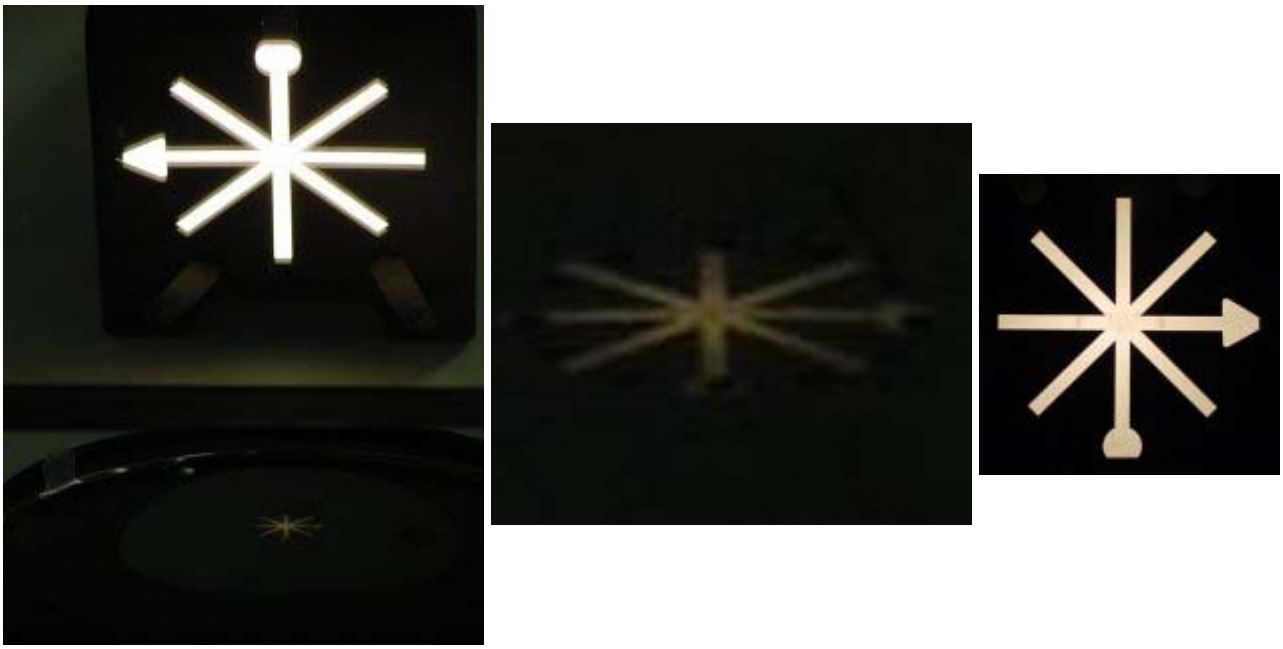
Answer #285

By way of reminder, immediately below is a photograph of the setup used to take the answer photographs that follow:



The first answers are: the image is real, inverted, and smaller than the object, as seen in the photograph below. It must be real so the a screen (the retina) can sense it at that point. Light is actually focused on the retina to create the image. It is inverted, as is any real image produced by a focusing (convex) lens. See Question #237 for an experiment demonstrating that the image on the retina is inverted top-to-bottom. It must be smaller than the object, so that your retina can include the image of much larger objects than the size of the retina itself. The photograph at left below includes both the image on the retina (bottom of photograph) and the reflection of the object in the plane mirror seen in the setup photograph. Note that this also provides a comparison between the sizes of the object and the image on the retina. At the center is a magnified inset of the image on the retina. Comparison of the reflection of the object with the image indicates that the image on the retina is indeed inverted (in both directions).



The second answer is (c); the image on the retina is inverted (in both directions), as seen by comparison of the actual photograph of the image at the left above with the sample photograph from the question, seen at the right above.

Question #286 is a follow-up to this question.

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.