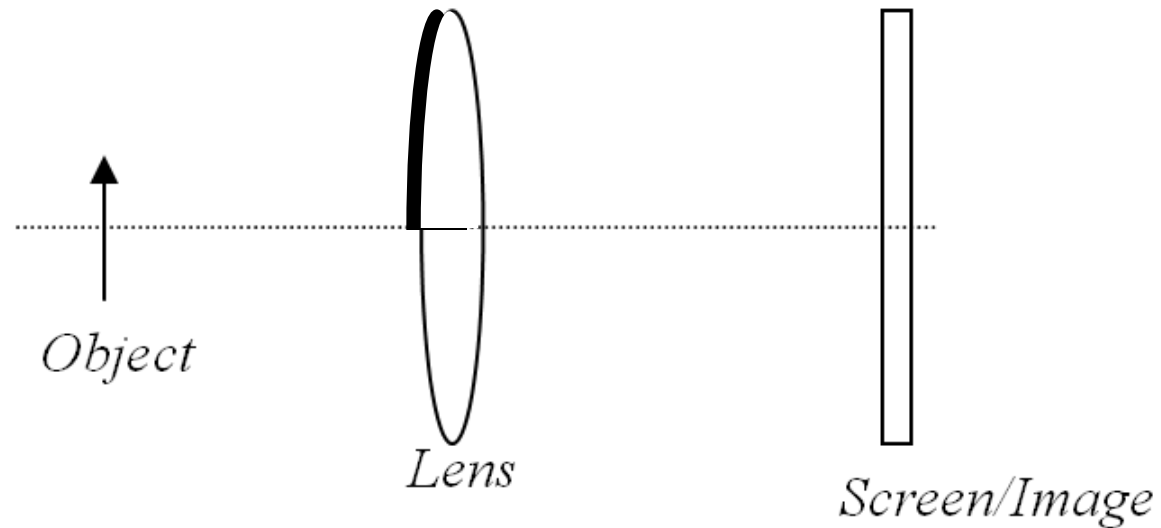


CheckPoint 1b



A converging lens is used to project the image of an arrow onto a screen as shown above. A piece of black tape is now placed over the upper half of the lens. Which of the following is true?

- A. Only the lower half of the object will show on the screen
- B. Only the upper half of the object will show on the screen
- C. The whole object will show on the screen

- (A) “The light from the top half that would have been refracted down no longer passes through the lens.”
- (B) “Blocking out the top of the lens will block out the lower tail of the arrow so that only the arrow head is shown.”
- (C) “While some of the rays are blocked by the tape, every ray emanating from any point on the object that passes through the lens converges to the corresponding point in the image, and there are no points on the object for which multiple rays do not make it through the lens, so an image is formed just as before.”

