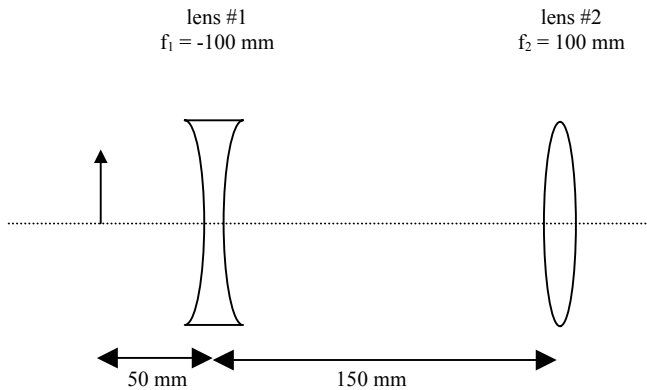


Review Problem

An arrow is followed by a diverging lens and a converging lens. The two lenses together form an image.

- (a) Where is the final image? (Specify distance from the converging lens and whether it is to the left or right of it.)
- (b) Is the final image real or virtual? Which way is the arrow's image pointing: up or down?
- (c) What is the magnification of the system?



Reminders: If f is the focal length, o the object distance and i the image distance for a given lens: $1/f = 1/o + 1/i$. Sign convention: the object distance is positive if the object lies before the lens and the image distance is positive if it comes after. The magnification $m = -i/o$. For multi-lens problems you handle the first lens first, and then use the image of the first lens as the object for the second lens. Note this means the second lens's object can come after the lens itself.