

## Physics 2135

## Special Homework Assignment #10

A lens forms an image of an object. The object is 20.0 cm from the lens. The image is formed 15.0 cm from the lens on the *same side* as the object.

(a) What is the focal length of the lens? Based on the results of your calculation, is it a converging or diverging lens?

(b) If the object is 8.0 mm tall, how tall is the image? Based on the results of your calculation, is it upright or inverted?

(c) Verify your calculations by making a complete ray diagram showing the formation of the image using the figure provided. Adjacent marks on the principal axis are separated by 10.0 cm.

