Light #2

1. A *diverging* lens has a focal length of 9.0 cm, and an object is placed 3.0 cm from the lens.
   (a) What would be the distance of the image from the lens?

   (b) What is the magnification of the image?

   (c) Will the image be real or virtual? How do you know?

2. A rutabaga, which has a height of 44 cm is placed 10 cm in front of a lens. The image produced has a height of 66 cm and is *inverted*.
   (a) What would be the distance of the image from the lens?

   (b) What is the magnification of the image? (*Be careful with signs!*)

   (c) What is the focal length of the lens?

3. A *converging* lens has a focal length of 20.0 m. It is 60.0 m away from an antelope.
   (a) What would be the distance of the image from the lens?

   (b) What is the magnification of the image?

4. You place a penny under a converging lens of focal length 75 mm. You hold the lens 50 mm away from the penny. What is the magnification of the lens?