CHECK YOUR LEARNING

1. (a) In your own words, state the imaging rules for converging lenses.
   (b) How are these rules slightly different for diverging lenses? K/U

2. Copy Figure 8 into your notebook. T/I C
   (a) Add light rays to the diagrams to locate the image for each object.
   (b) Describe the image characteristics for each object.

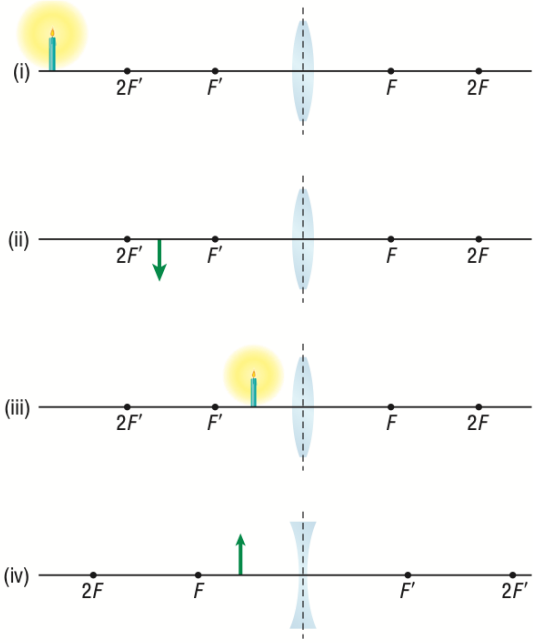

Figure 8

3. Copy Figure 9 into your notebook. Use light rays to locate *F*. T/I C

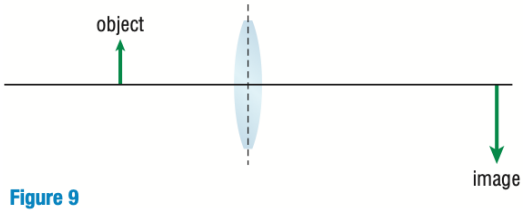

Figure 9

4. Copy Figure 10 into your notebook. T/I C
   (a) A screen is used to cover half of the lens (Figure 10(i)). Use light rays to locate the image on the diagram.
   (b) A screen is used to cover half of the object (Figure 10(ii)). Use light rays to locate the image on the diagram.

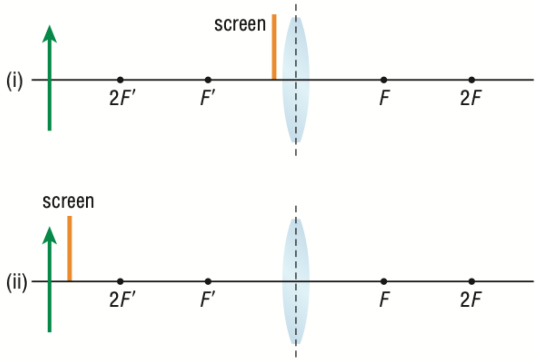

Figure 10

5. Why does a diverging lens never produce a real image? K/U
6. How is the virtual image produced by a converging lens different from the virtual image produced by a diverging lens? K/U
7. Write a general statement that is valid for both kinds of lenses that summarizes the relationship between the type and the attitude of the image. K/U T/I
8. When you watch a movie projected onto a screen, you are seeing an image. Traditional-style movie projectors include a light and a lens to project the picture onto the screen. T/I C
   (a) What type of lens is used in the projector? Explain.
   (b) Draw a ray diagram that includes the film (the object), the lens, and the image on the screen.
   (c) Describe the characteristics of this image.