

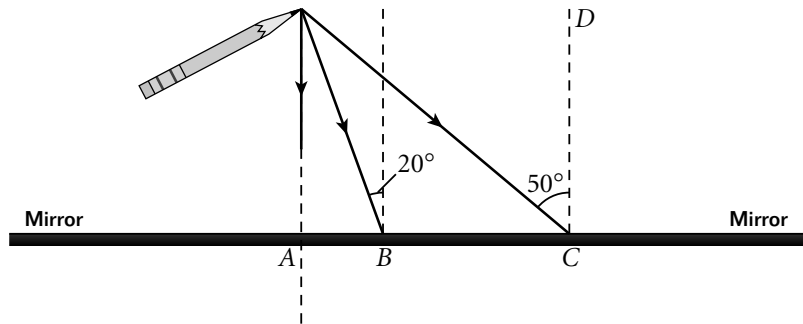
Section  
**14-2**

HOLT PHYSICS

# Diagram Skills

## Flat Mirrors

1. The point of a 20.0 cm pencil is placed 25.0 cm from a flat mirror. Its eraser is 15.0 cm from the mirror. Three of the light rays from the pencil's point hit the mirror with incident angles of  $0^\circ$ ,  $20^\circ$ , and  $50^\circ$  at points  $A$ ,  $B$ , and  $C$  as shown.



- a. Use a protractor to draw the reflected rays from points  $A$ ,  $B$ , and  $C$ .
- b. Where do reflected rays or their extensions intersect?
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- c. What is the distance between the pencil's head and its image?
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- d. Would a person's eye located at point  $D$  perceive one of the reflected rays you drew? Will the person be able to see the image? Explain.
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- e. What if the eye is located at point  $E$ ?
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- f. Draw incident rays from the eraser of the pencil to point  $A$  and to point  $B$ . Measure their incident angles and write them on the line below.
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- g. Draw the reflected rays and locate the image of the eraser. Draw the pencil's image.