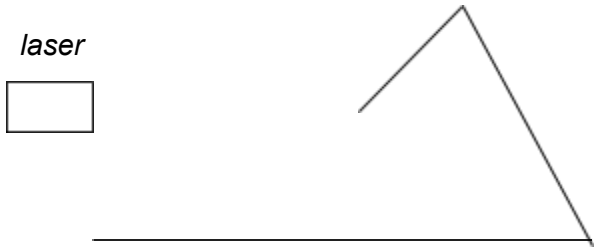
Reflection

1. Draw a diagram to show why a surface needs to be smooth in order to see an image in another object. (Why can't you see a sharp reflection in the classroom tables?)

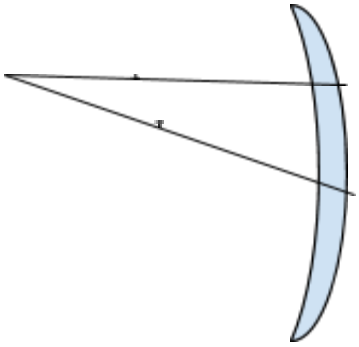
2. Explain (draw a ray diagram) why objects appear to be horizontally reversed in a mirror.

3. Draw a ray diagram to show why objects are **not** vertically reversed in a mirror.

4. When a laser-pointer is pointed at a series of mirrors, the light follows the path shown below. Indicate where the mirrors would be located and their orientation. Briefly explain your answers.



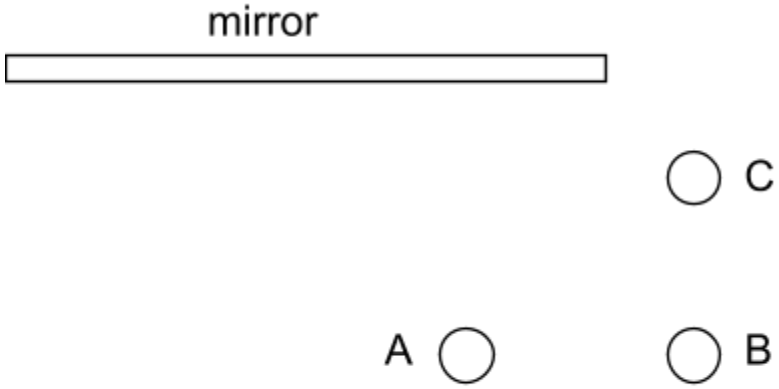
5. Two rays of light are incident on a curved mirror. Continue the paths of the light.



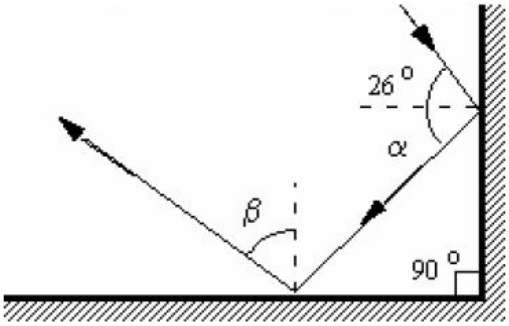
6. Three people, Allen, Bernie and Carl are sitting in chairs that are close to a flat mirror as shown below.

a. In what order, (left to right) would Allen see the following: his own image, Bernie's image, Carl's image, Carl? If there is anything on the list that Allen cannot see, specifically identify it.

b. In what order, (left to right) would Bernie see the following: his own image, Allen's image, Carl's image, Carl? If there is anything on the list that Bernie cannot see, specifically identify it.



7. A ray of light is reflected from two plane mirror surfaces as shown in the figure. What are the correct values of α and β?



α =

β =