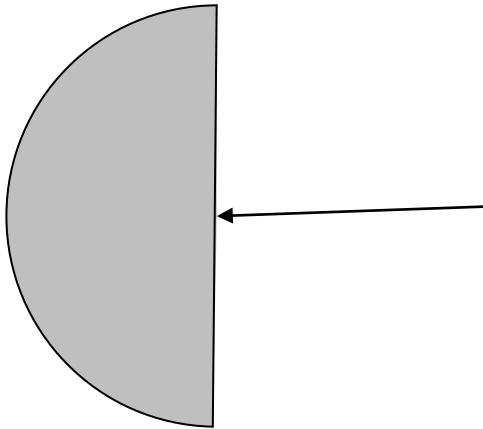


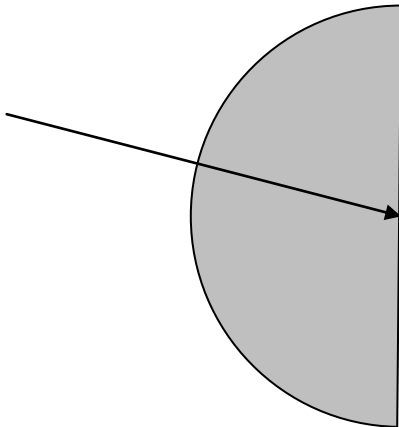
WS8 Total Internal Reflection

Use the ray box with a single ray and the hemicylindrical optic. Examine what happens as a single ray is incident on the flat side of the optic. Be certain to come in at the center of the optic.

Rotate the optic (while keeping the ray coming into the center of the optic) and observe what happens to the exiting ray. Compare the angle of incidence with the angle with which the ray exits. Is there any incident angle at which you do not have an exiting ray?



Now you want to arrange the optic so that the light enters the curved surface, but exits through the center of the flat surface. What happens as you rotate the optic? Compare the angle of incidence with the angle with which the ray exits. Is there any incident angle at which you do not have an exiting ray? Explain.



Why do you think the optic used for this investigation is shaped as it is? Explain what happens to rays at each surface.