## Object-Image Relationships

Two physics students are conducting an investigation on how the characteristics of the images formed by a concave mirror depend upon the object's distance from the mirror. They acquire a small concave mirror with a 20.0-cm focal length (f) and mount it on a lab bench. They place a 4.0-cm high light bulb at varying distances from the mirror and project the image of the light bulb onto a note card. They measure the object distance ($d_o$) to the mirror, the image distance ($d_i$) to the mirror, and the image height ($h_i$). **Figure 1** and **Figure 2** show a representation of their data.