1. Bobby places a $4.75-\mathrm{cm}$ tall light bulb a distance of 33.2 cm from a concave mirror. If the mirror has a focal length of 28.2 cm , then what is the image height and image distance?
2. Van Itee, quite concerned about the pimple on his chin, is looking into a concave mirror with a focal length of 40.6 cm . Determine the image height and image distance of the $2.70-\mathrm{mm}$ sized pimple when placed 24.2 cm from the mirror.
3. Al Wayscurious is intrigued by the reflective abilities of his family's soup ladle. The ladle acts as a concave mirror with a $2.69-\mathrm{cm}$ focal length. Determine the image size of Al's $28.8-\mathrm{cm}$ tall face when placed 15.8 cm from the ladle's surface.
4. Mr. H splurged when he bought his Yugo and ordered the side mirror option. The mirror has a focal length of -99.4 cm. What is the image height of a 4.69-meter tall truck when located 16 meters away from the mirror?
5. A Christmas tree ornament with an 16 cm diameter serves as a convex mirror surface. Determine the image size and the image distance of a 1.6 -meter tall child standing a distance of 2.8 meters away.
