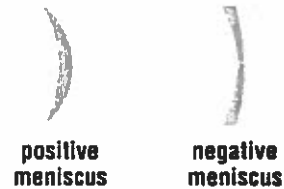


✓ CHECK YOUR LEARNING

Suggested Answers

- Both the human eye and a camera have: (1) a converging lens that casts a real, smaller-than-life, inverted image, (2) a means for focusing images of objects that lie at different distances and (3) a light-sensitive sensor that "captures" the image.
- The eye simply sends nerve signals through the optic nerve to the brain. The brain interprets these signals and creates the image that we see in our mind.
- (a) Far-sighted individuals see close objects poorly, whereas near-sighted individuals see distant objects poorly.
(b) A converging lens will correct far-sightedness. A diverging lens will correct near-sightedness.
- (a) One shape is a positive meniscus and the other is a negative meniscus.
(b) A meniscus is more cosmetically appealing than basic lenses because the lenses are much thinner than basic lenses.



- (a) The condition is presbyopia and it is caused by a loss of elasticity in the lens of the eye as a person gets older.
(b) Presbyopia is a form of far-sightedness and thus can be corrected with a positive (converging) meniscus.
- No. Starting a fire in this manner requires a lens that concentrates light rays by converging them, and near-sightedness is corrected with diverging lenses. The image below shows that a diverging lens like those used in glasses to correct near-sightedness will not concentrate the light, as would be necessary.

