

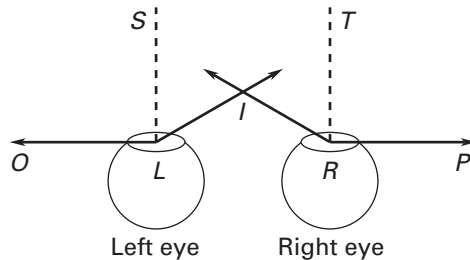
Interdisciplinary Application

For use with pages 26–32

Field of Vision

HEALTH In health class, you study eye care and eye disease. You learn that tunnel vision is a serious sight impairment that can reduce a person's field of vision, the physical space visible to the eye in a certain position. Looking directly forward, the eye can see about 60° inward (toward the nose) and about 90° outward (toward the side of the face). The outer range of vision is called peripheral vision.

Let $\angle OLS$ and $\angle PRT$ represent the outward vision angle of 90° . Let $\angle SLI$ and $\angle TRI$ represent the inward vision angle of 60° .



1. Name the angle that represents the total range of vision for the right eye.
2. Find the measure of the angle from Exercise 1.
3. If peripheral vision in each eye were reduced so that the outward vision angle was congruent to the inward vision angle, what would the total range of vision be in the right eye?
4. Severe tunnel vision is classified as legal blindness if the total range of vision in each eye is reduced to 20° or less. What would the measures of the inward and outward angles of vision be for each eye?
5. What percent of vision is lost with severe tunnel vision? How would that impair a person's ability to drive a car?