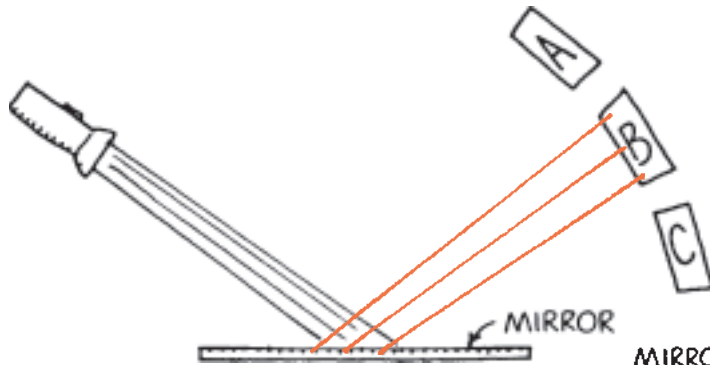


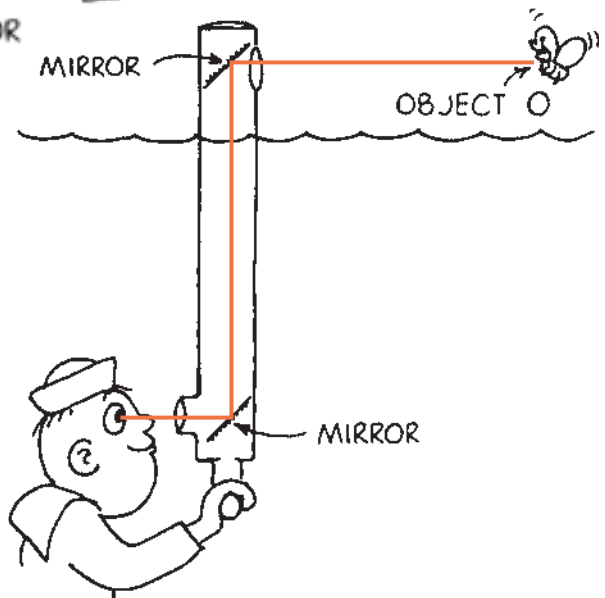
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Reflection

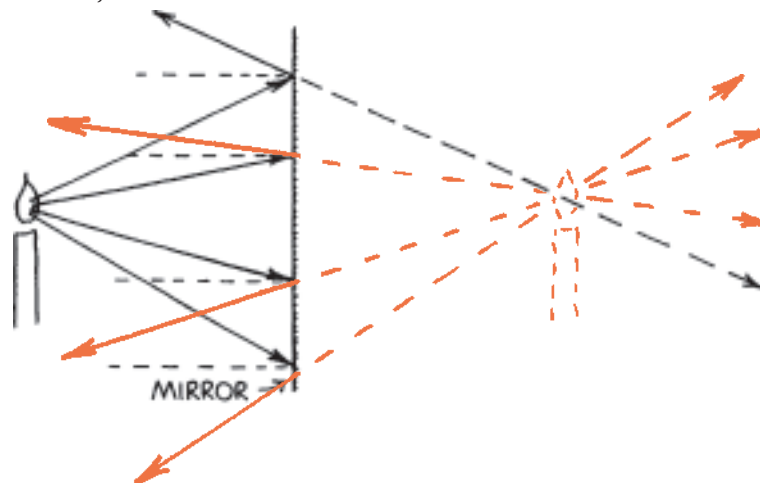
1. Light from a flashlight shines on a mirror and illuminates one of the cards. Draw the reflected beam to indicate the illuminated card.



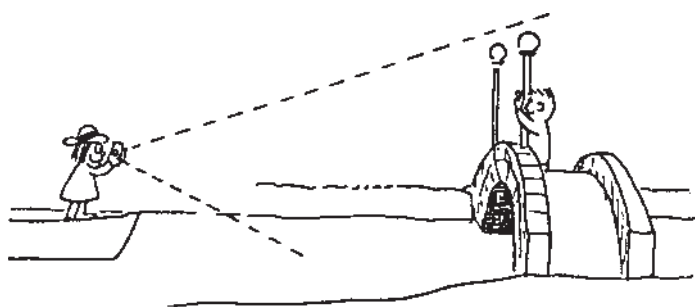
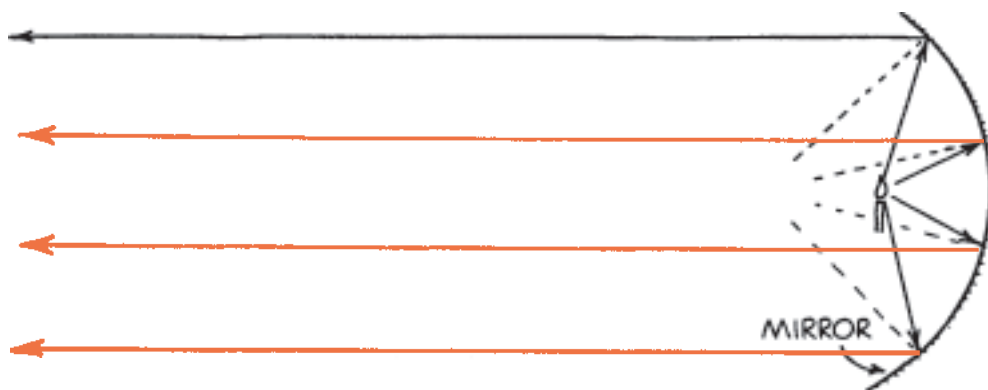
2. A periscope has a pair of mirrors in it. Draw the light path from the object O to the eye of the observer.



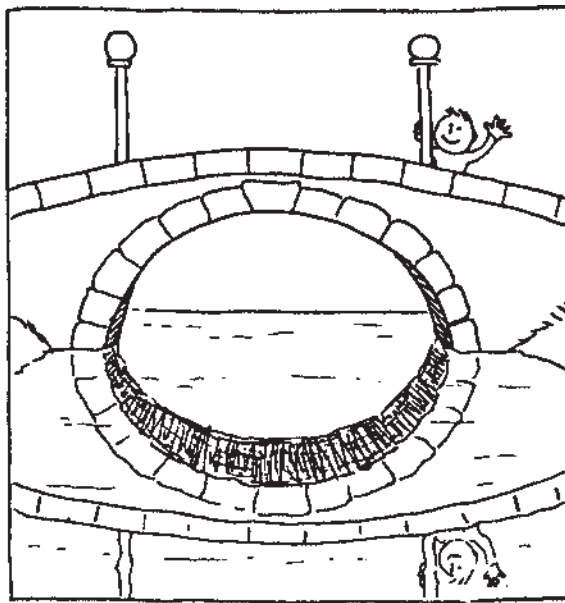
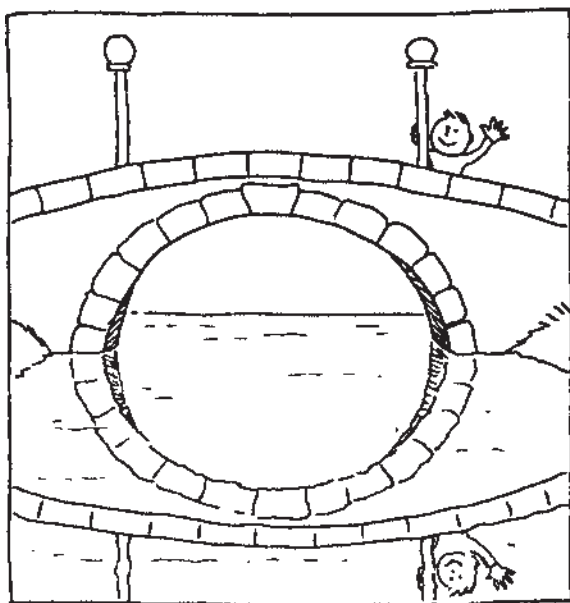
3. The ray diagram below shows the extension of one of the reflected rays from the plane mirror. Complete the diagram by (1) carefully drawing the three other reflected rays, and (2) extending them behind the mirror to locate the image of the flame. (Assume the candle and image are viewed by an observer on the left.)



4. The ray diagram below shows the reflection of one of the rays that strikes the parabolic mirror. Notice that the law of reflection is obeyed, and the angle of incidence (from the normal, the dashed line) equals the angle of reflection (from the normal). Complete the diagram by drawing the reflected rays of the other three rays that are shown. (Do you see why parabolic mirrors are used in automobile headlights?)



5. A girl takes a photograph of the bridge as shown. Which of the two sketches correctly shows the reflected view of the bridge? Defend your answer.



The right view is correct. The reflected view shows the underside of the bridge, or what you would see if your eye were as far below the water surface as your eye is above it. (Place a mirror on the floor in front of a table. Students will see that the reflected view of the table shows its bottom.)

CONCEPTUAL PHYSICS