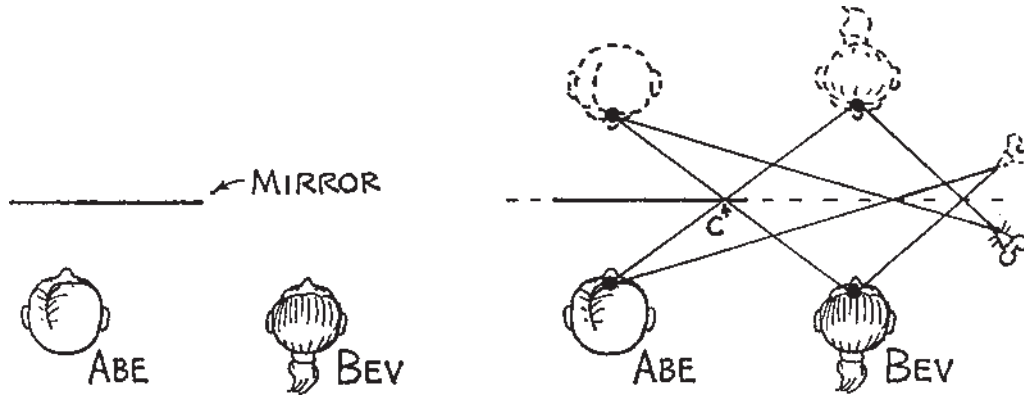


**Concept-Development Practice Page 29-2**

**Reflection**



Abe and Bev both look in a plane mirror directly in front of Abe (left, top view). Abe can see himself while Bev cannot see herself—but can Abe see Bev, and can Bev see Abe? To find the answer we construct their artificial locations “through” the mirror, the same distance behind as Abe and Bev are in front (right, top view). If straight-line connections intersect the mirror, as at point C, then each sees the other. The mouse, for example, cannot see or be seen by Abe and Bev.

Here we have eight students in front of a small plane mirror. Their positions are shown in the diagram below. Make appropriate straight-line constructions to answer the following:



\_\_\_\_\_

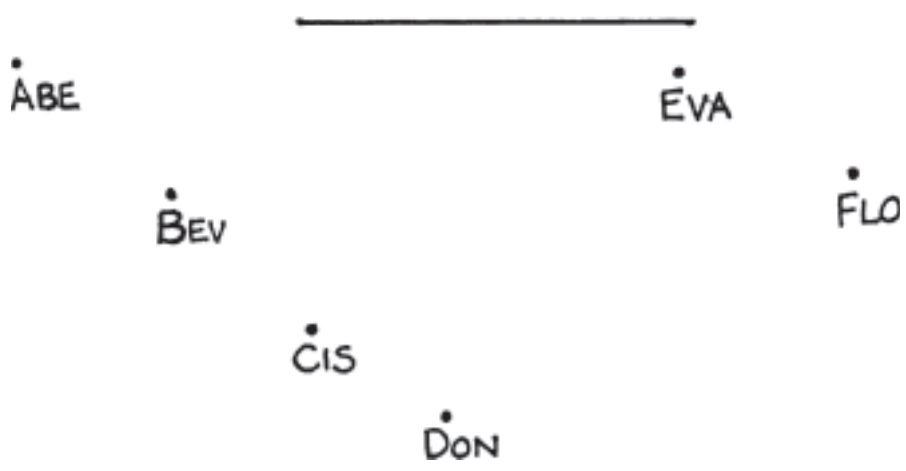
• ABE    • BEV    • CIS    • DON    • EVA    • FLO    • GUY    • HAN

- Who can Abe see? \_\_\_\_\_ Who can Abe not see? \_\_\_\_\_
- Who can Bev see? \_\_\_\_\_ Who can Bev not see? \_\_\_\_\_
- Who can Cis see? \_\_\_\_\_ Who can Cis not see? \_\_\_\_\_
- Who can Don see? \_\_\_\_\_ Who can Don not see? \_\_\_\_\_
- Who can Eva see? \_\_\_\_\_ Who can Eva not see? \_\_\_\_\_
- Who can Flo see? \_\_\_\_\_ Who can Flo not see? \_\_\_\_\_
- Who can Guy see? \_\_\_\_\_ Who can Guy not see? \_\_\_\_\_
- Who can Han see? \_\_\_\_\_ Who can Han not see? \_\_\_\_\_

thax to Marshall Ellenstein

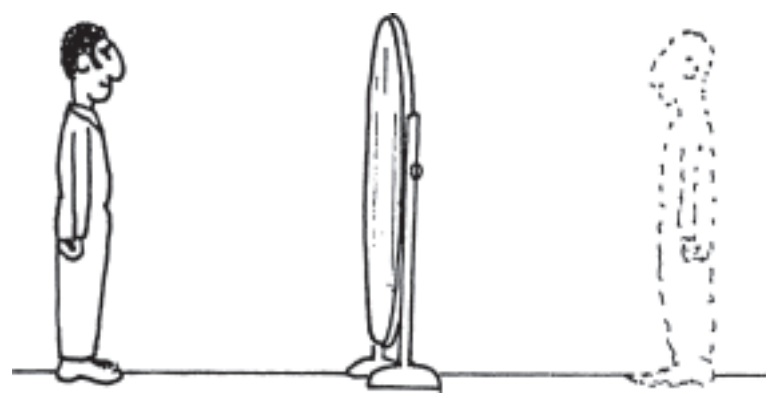
**CONCEPTUAL PHYSICS**

Six of our group are now arranged differently in front of the same mirror. Their positions are shown below. Make appropriate constructions for this more interesting arrangement, and answer the questions below.



- Who can Abe see? \_\_\_\_\_ Who can Abe not see? \_\_\_\_\_
- Who can Bev see? \_\_\_\_\_ Who can Bev not see? \_\_\_\_\_
- Who can Cis see? \_\_\_\_\_ Who can Cis not see? \_\_\_\_\_
- Who can Don see? \_\_\_\_\_ Who can Don not see? \_\_\_\_\_
- Who can Eva see? \_\_\_\_\_ Who can Eva not see? \_\_\_\_\_
- Who can Flo see? \_\_\_\_\_ Who can Flo not see? \_\_\_\_\_

Harry Hotshot views himself in a full-length mirror (right). Construct straight lines from Harry's eyes to the image of his feet and to the top of his head. Mark the mirror to indicate the minimum area Harry uses to see a full view of himself.



Does this region of the mirror depend on Harry's distance from the mirror?

**CONCEPTUAL PHYSICS**