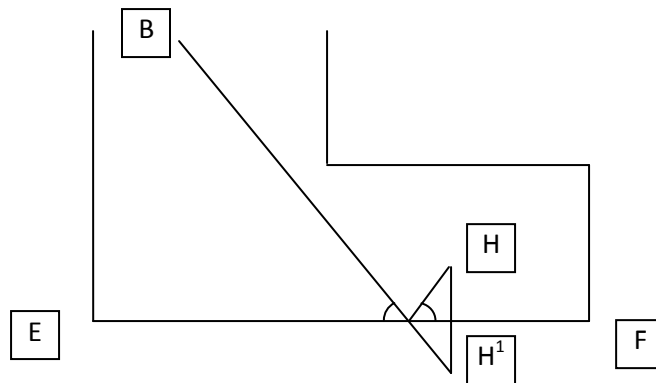
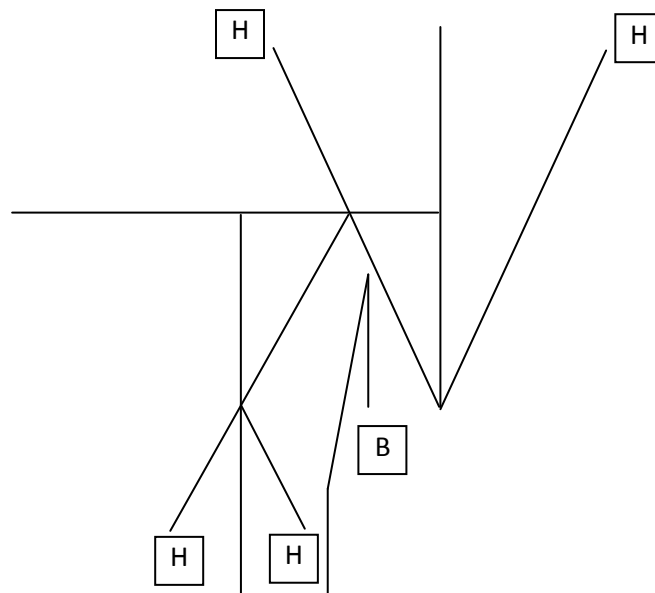


To play miniature golf it helps if you know all the angles. When a ball is hit without spin against a wall, it bounces off the wall as if it had gone through the wall and its path was reflected back over the wall. The angle at which it hits and the angle at which it bounces off are equal.



To find where to aim the ball B to hit the hole H, reflect H across the walls. See diagram below.



Go to a nearby miniature golf course. Choose six of the holes that could be played in this manner. Get permission from the manager of the miniature golf course to measure these playing areas. Draw the playing area of each hole to scale. Use the geometry of reflection to decide the best place to aim the ball.

Go back to the miniature golf course with a friend and use your strategy to play the game. Write an evaluation of how your strategy worked on each hole compared to your friend's. Include a diagram of each hole and the strategy used. Give the report to the teacher.