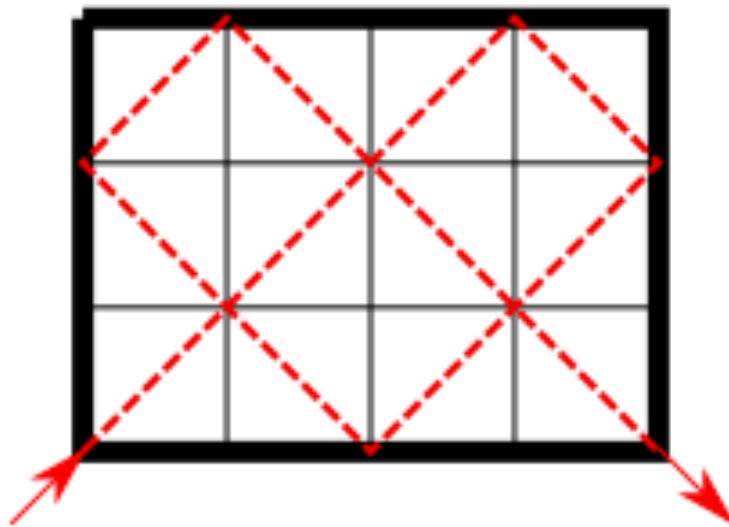


# Puzzle of the Week

## *Bouncing Billiard Ball*

**THE CHALLENGE:** A billiard ball shot at a 45 degree angle from the lower left corner of a 3 by 4 billiard table will bounce 5 times before hitting the lower right corner of the table. If you start at the lower left corner of a 4 by 7 billiard table, how many times will the ball bounce before hitting one of the corners?



**EXPLORATION:** For other sizes of tables, can you predict which corner will be hit first and how many bounces will be made? Can you use some ideas from geometry to help you simplify the problem?