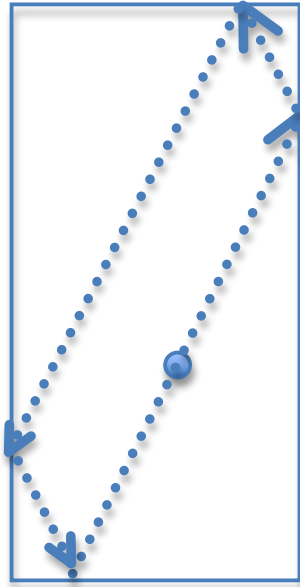


Problem of the Week November 29, 2011

Pool Table III



A ball is placed randomly on a perfect pool table (no pockets and no friction, so once set in motion the ball rolls forever). How should you aim the ball to get it to hit all four sides and pass through the starting point as shown? How long is a round trip?

Note 1: in a perfect world, such as the one we are imagining here, balls bounce off sides at the same angle at which they hit. Thus:



Note 2: if it helps to be numerical, in a regulation table the long side is twice as long as the short. That's the ratio shown above.