

1077-53-61

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Where Geodesics Go to Die.

Given the dimensions a, b, c of a rectangular box, we investigate geodesics that start at one corner and move at angle of 45 degrees from the edges. Our results and conjectures concern whether or not the geodesic ends at a corner (dies), and if it does, its destination and length. We draw connections to number theory, the Sierpinski gasket and the Rubik's cube. (Received July 14, 2011)