

The Dynamics of Irrational Rotations of the Circle

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Presented by the Stony Brook Math Club

Abstract

Circle rotations are classic examples of dynamical systems. We will introduce ideas from dynamical systems through the example of an irrational rotation. We will also give a new construction of an irrational rotation through the method of "cutting and stacking" intervals. If time permits, we will show how the circle rotation can be used to answer Gelfand's question: How often do we see a power of 2 whose first digit is a 7?