

MICE PROBLEM AND FRACTALS

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The celebrated Mice Problem – that of n objects chasing each other from corners of an n -sided polygon – in mathematics is a special case of more general Pursuit Problem. A new approach to solution of this problem, not found in standard texts, is given in this article using the concept involved in fractals, an unconventional geometric shape that can be divided into parts, each of which is a smaller duplicate of the whole. Similar parts of such objects as cloud or branches of a tree can be obtained by rotation and scaling of another part. Precisely, this mathematics of successive rotation and scaling has been utilized in finding the solution to the Mice Problem.
