

Think It Over



This section of *Resonance* presents thought-provoking questions, and discusses answers a few months later. Readers are invited to send new questions, solutions to old ones and comments, to 'Think It Over', *Resonance*, Indian Academy of Sciences, Bangalore 560 080. Items illustrating ideas and concepts will generally be chosen.

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Motion with a Constraint

Problem 1.

Consider a walker W who walks in a big playground such that W is always twice as far from a point A_1 , as W is from a point A_2 . Here A_1 and A_2 are fixed. Find the path traced by the walker W .

Problem 2.

Consider a bird B that is flying in space in such a way that it is always three times as far from the top of tower T_1 as it is from the top of tower T_2 . What is the collection of points in space traced by the bird B .

Problem 3.

Formulate and solve a generalization of the above two problems to higher dimensions.

Keywords
Motion, constraint, path.

