

Some combinatorial aspects of a counterfeit coin problem

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Abstract

Considered is the set-up of availability of n coins and the possibility of at the most one of these coins being counterfeit in the sense of possessing slightly more or slightly less weight than that of the rest, though all the coins have remarkably identical appearance ! There has been considerable interest in the underlying combinatorial problem of checking the existence of such a coin and identifying the same [in case it exists] in minimum number of efforts with an ordinary 2 - pan balance.

After quickly reviewing the literature, we propose to discuss some combinatorial aspects of this problem in situations wherein two or more 2-pan balances are made available to us.