

# EFRON'S COINS AND THE LINIAL ARRANGEMENT

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## Abstract

We characterize the tournaments that are dominance graphs of sets of (unfair) coins in which each coin displays its larger side with greater probability. The class of these tournaments coincides with the class of tournaments whose vertices can be numbered in a way that makes them semiacyclic, as defined by Postnikov and Stanley. We provide an example of a tournament on nine vertices that can not be made semiacyclic, yet it may be represented as a dominance graph of coins, if we also allow coins that display their smaller side with greater probability. We conclude with an example of a tournament with 81 vertices that is not the dominance graph of any system of coins.

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