1096-52-1493  Yumi Li* (yumi.li92@gmail.com), Jordan Awan, Claire Frechette and Liz McMahon.

Finite Geometry in the Card Game SET.

The card game SET serves as an excellent model for the finite geometry AG(4,3). Using that model, previous researchers have found partitions of AG(4,3) into 4 disjoint maximal caps along with a distinguished point/card. We define a new geometric object, a demicap - a maximal cap can be written as the union of two disjoint demicaps. We will present results about these demicaps, which provide insight into the maximal cap partitions of AG(4,3). (Received September 15, 2013)