

Tutoria, 17:00

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- 1. (2021 APMO, 4) Given a 32 × 32 table, we put a mouse (facing up) at the bottom left cell and a piece of cheese at several other cells. The mouse then starts moving. It moves forward except that when it reaches a piece of cheese, it eats a part of it, turns right, and continues moving forward. We say that a subset of cells containing cheese is good if, during this process, the mouse tastes each piece of cheese exactly once and then falls off the table. Show that:
 - (a) No good subset consists of 888 cells. (b) There exists a good subset consisting of at least 666 cells.