

Two players take alternating turns filling a rectangular board with unit squares without rotation, but may be otherwise arbitrary. Squares may not overlap and the game ends when there is no space for the next one.

The result of the game is the number of turns. The constructor aims to maximize this quantity while the destructor wants to minimize it. We would like to get close to this value, provided that both players use their optimal strategy.

We prove some new lower and upper bound for the game. This thesis extends results given by Tamás Hubai in his paper Competitive rectangle filling.

Furthermore, we have a look at other board shapes and shapes to fill with.