

TR₀₁₁.n²

Solution. Let A be the first player and B the second one. Since A plays first, they can reach point C sooner, making n moves downwards and then n moves to the left. Then they can get back to their start point, making n moves upwards and n moves to the right. In this case, the first player wins the upper right square with an area of n^2 . Now we prove that the second player can play in a way that the first player won't be able to win an area of more than n^2 .

wrapfigurer.31 -.6cm tikzpicture[line cap=round,line join=round,ı=triangle 45,x=1cm,y=1cm,scale=.31] (-7.7,-4.5) rectangle (4,6.5); [line width=1.2pt] (-6,-4) -- (3,-4) -- (3,5) -- (-6,5) -- cycle; [line width=.8pt] (-1.5,5) -- (-1.5,-4); [line width=.8pt] (-6,0.5) -- (3,0.5); [line width=1.2pt] (-6,5) -- (-1.5,5); [line width=1.2pt] (-1.5,5) -- (3,5); [line width=1.2pt] (-6,5) -- (-6,0.5); [line width=1.2pt] (-6,0.5) -- (-6,-4); (3.1,5.55) node A; (-6.6,-4) node B; (-3.68,5.4) node n; (0.82,5.4) node n; (-6.54,2.99) node n; (-6.54,-1.51) node n; (-0.9,1.1) node C; scriptsize [fill=black] (-6,-4) circle (1.5pt); [fill=black] (3,-4) circle (1.5pt); [fill=black] (3,5) circle (1.5pt); [fill=black] (-6,5) circle (1.5pt); [fill=black] (-1.5,5) circle (1.5pt); [fill=black] (3,0.5) circle (1.5pt); [fill=black] (-1.5,-4) circle (1.5pt); [fill=black] (-6,0.5) circle (1.5pt); [fill=black] (-1.5,0.5) circle (1.5pt);