12-th Bulgarian National Olympiad in Informatics

May 3 and 6, 1996

Problem 2.

Given are no more than 50 rectangles. Is it possible to cover some square using the rectangles by rotating and shifting them? It is not allowed to overlape rectangles as well to remain gaps on the square. Every rectangle must participate in the covering and no part of any rectangle should go out of the square.

The **input** file `INPUT2.TXT` contains several sets of test data. Each row of the file consists of two nonnegative integers meaning the length and the width of the subsequent rectangle. Every data set ends by a pair of zeros.

Output file `OUTPUT2.TXT` must contain one number in each its row for every data set and its value must be equal to the length of the side of the square, if the covering is possible, and zero, otherwise.

Source: Matematika i informatika, journal published by Bulgarian Ministry of Education, n. 4, 1996, pp. 53-54.

Return to the Home Page of Bulgarian Mathematics and Informatics Competitions.

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