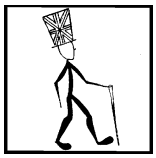

M A T H S

rovatvezető: Ronald Garrett

Welcome back to the English-language math page. I hope you enjoyed the first problem. The key to a full credit solution was a careful reading of the problem. This is especially true of this month's problem.
The first problem was based on geometry, so the second is based on some basic algebra, although you really don't need to know algebra to solve it- just some careful thinking will do it.

Problem 2: Find all the possible values of x, $x \geq 1$, such that the quantity $\frac{6}{x}$ is an integer (an integer is a positive or negative whole number or zero-no fractions). Be careful- read the problem again. It is a bit trickier than it looks.

Solutions should be sent to:

Deadline: 12 November, 2002
MATEGYE Alapítvány 6001 Kecskemet, Pf. 585
Please write "MATHS" on the envelope.

Problem 1: In how many different ways can 1 cm by 2 cm rectangles be packed into a horizontal 2 cm by 4 cm rectangle, completely filling it?

Solution of Problem 1: There are five distinct arrangements, as illustrated. Arrangements 4 and 5 are, arguably, the same under a 180-degree rotation, but any other rotations are clearly not allowable, as the problem postulates a horizontal rectangle.

* * * * *

Statisticians are mathematicians who deal with averages a lot. 3 statisticians went duck hunting. The first one shot at a duck, and missed 10 m too high. The second one shot at the same duck, and missed 10 m too low. The third statistician yelled happily, "We got him".