

SuperCon '97

Sponsored by Computer Center, Tokyo Institute of Technology

SUPER COMPUTER CONTEST '97 FOR HIGH SCHOOL STUDENTS

Entry Exercise:

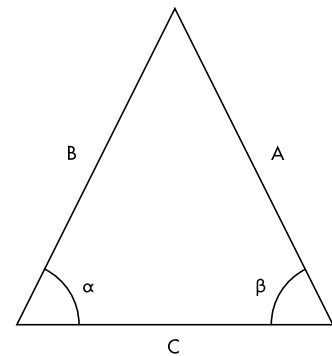
Given a two-columns/four-rows table in which each element consists of 0,1s. Find a sequence of rows by which the sequences of elements in each columns exactly become the same.

Ex.	Col-Blue	Col-Red
Row-1	010	10
Row-2	101	10
Row-3	0	000
Row-4	0	101

Ans. Row-2, 1, 2, 1, 4, 3 = 10101010101000

Contest Exercise: "Triangle Billiards Problem"

Given a triangle billiards (see the below). The ball starts at the edge C. Find sets of a starting point and an angle to which the ball will return in the same point with N cycles.



Conditions:

1. The size of the ball is zero.
2. Angles of Alpha, Beta and the cycle N are not given in advance.

The Contest was performed with the following hardware/software conditions : Cray C916/12256 (Clock 4 ns,12 CPUs, 2GB Memories)

CPUs : 9, Memory:128 MB, Running mode : dedicated to one job at a time

Compiler options : nothing. (1) the inner most loop can be vectorized. (2) No autotasking, but directives can be allowed to be added into source codes.

Winner's Results:

Alpha=60, Beta=60 : 30 seconds

Alpha=30, Beta=40 : 48 seconds

Alpha=40, Beta=70 : 52 seconds



Team Chaos(Azabu High School)
(ADACHI Shin, WATANABE Morio, KUMATA Takehiro(not seen))

We are waiting for your challenge next year 1998.

For more information or comments, send an e-mail to: office@cc.titech.ac.jp.

