

A SQUARE AND A CIRCLE (Estonia)

The problem is unexpectedly hard to solve if geometric formulae are used in a straightforward way.

The program *SQandCI* (in the file SQUARE1.PAS) uses the following idea:

If the square belongs completely to the circle, the common area is the area of the square. If they have no common points, then the common area is 0.

In case only a part of the square belongs to the circle, we divide the square into four equal squares, and apply the same procedure four times recursively.

The program *RingJaRuut* (in the file SQUARE2.PAS) uses integration.