

# IOI'94 - Day 2 - Problem 3: The Circle

## Competition Rules

## Problem Statement

Example input and output files from the problem statement (see below for format of output file):

- 1. [Input](#) / [Output](#) (5, 2, 1; maximum is 21 with 4 solutions)

There are 8 tests. Each successfully completed test gives 5 points. Therefore the maximum number of points for this problem is 40. The maximum execution time is 30 seconds per test.

## Test Data

**N.B.** The following test data were not available during the competition. They were used to judge the programs of the competitors after the competition.

The output file starts with the largest number that can be generated, followed by all solutions that generate this number. The order in which solutions are presented in the output file is free. The test output files contain the solutions in one order only; all permutations, however, are correct too.

1. [Input](#) / [Output](#) (3, 1, 1; maximum is 7 with 2 solutions)
2. [Input](#) / [Output](#) (4, 2, 2; maximum is 13 with 2 solutions)
3. [Input](#) / [Output](#) (5, 3, 1; maximum is 22 with 2 solutions)
4. [Input](#) / [Output](#) (4, 16, 1; maximum is 23 with 6 solutions)
5. [Input](#) / [Output](#) (5, 16, 12; maximum is 20 with 24 solutions)
6. [Input](#) / [Output](#) (6, 1, 1; maximum is 31 with 10 solutions)
7. [Input](#) / [Output](#) (6, 2, 2; maximum is 29 with 2 solutions)
8. [Input](#) / [Output](#) (6, 4, 4; maximum is 31 with 6 solutions)

## Analysis and Solution