

General information

Unless otherwise stated, the following conditions hold for all problems.

Program name

1. Your solution must be called `codename.c`, `codename.cpp`, `codename.java`, `codename.kt`, `codename.py3`, where `codename` is the capital letter which identifies the problem.

Input

1. The input must be read from standard input.
2. The input consists of a single test case, which is described using a number of lines that depends on the problem. No extra data appear in the input.
3. When a line of data contains several values, they are separated by *single* spaces. No other spaces appear in the input. There are no empty lines.
4. The English alphabet is used. There are no letters with tildes, accents, diaereses or other diacritical marks (\tilde{n} , \tilde{A} , \acute{e} , \grave{I} , \hat{o} , \ddot{U} , ζ , etcetera).
5. Every line, including the last one, has the usual end-of-line mark.

Output

1. The output must be written to standard output.
2. The result of the test case must appear in the output using a number of lines that depends on the problem. No extra data should appear in the output.
3. When a line of results contains several values, they must be separated by *single* spaces. No other spaces should appear in the output. There should be no empty lines.
4. The English alphabet must be used. There should be no letters with tildes, accents, diaereses or other diacritical marks (\tilde{n} , \tilde{A} , \acute{e} , \grave{I} , \hat{o} , \ddot{U} , ζ , etcetera).
5. Every line, including the last one, must have the usual end-of-line mark.
6. To output real numbers, round them to the closest rational with the required number of digits after the decimal point. Test case is such that there are no ties when rounding as specified.