

A. Fancy Fence

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Emuskald needs a fence around his farm, but he is too lazy to build it himself. So he purchased a fence-building robot.

He wants the fence to be a regular polygon. The robot builds the fence along a single path, but it can only make fence corners at a single angle α .

Will the robot be able to build the fence Emuskald wants? In other words, is there a regular polygon which angles are equal to α ?

Input

The first line of input contains an integer t ($0 < t < 180$) — the number of tests. Each of the following t lines contains a single integer α ($0 < \alpha < 180$) — the angle the robot can make corners at measured in degrees.

Output

For each test, output on a single line "YES" (without quotes), if the robot can build a fence Emuskald wants, and "NO" (without quotes), if it is impossible.

Examples

input
3
30
60
90
output
NO
YES
YES

Note

In the first test case, it is impossible to build the fence, since there is no regular polygon with angle 30° .

In the second test case, the fence is a regular triangle, and in the last test case — a square.

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #165 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

[geometry](#) [implementation](#) [math](#)

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→ Contest materials

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