CODEFORCES β
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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 a.

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

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 a ($0 < a < 180$) — 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 .

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

Codeforces Round #165 (Div. 2)
Finished

→ **Virtual participation**

→ **Problem tags**

geometry   implementation   math
No tag edit access

→ **Contest materials**

- Announcement   ✕