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

Copy

```
3
30
60
90
```

output

Copy

```
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.