Constructible Regular Polygons

The investigation of which regular polygons can be constructed only with compass and straightedge is a classical problem in mathematics. Triangle, square, hexagon can easily be constructed, but, can we construct a regular heptagon? It was the German mathematician Gauss (1777-1855) who first proved that one could construct a 17-sided regular polygon and later, in one the of the most beautiful math works of all time (*Disquisitiones Arithmeticae*, 1798), he gave sufficient conditions to decide which regular polygons can be constructed.

Input
In the first line, an integer T<50000 representing the number of test cases; then, T integer numbers representing the number of sides of a non-degenerated regular polygon, up to 1000000 (10^6).

Output
Print “Yes” if the regular polygon can be constructed with compass and straightedge or “No” otherwise.

Example

Input
5
5
6
7
8
9

Output
Yes
Yes
No
Yes
No

If you have any question, you can ask in the forum.