

H. Armstrong numbers

Program:	armstrong .(cpp java)
Input:	armstrong .in
Balloon Color:	pink

Description

A number that has n digits is considered an *Armstrong* number if the summation of every digit raised to the power n is equal to the same number:

The number 370: $3^3 + 7^3 + 0^3 = 27 + 343 + 0 = 370$.

$1634 = 1^4 + 6^4 + 3^4 + 4^4$

24 is not an Armstrong Numbers as $2^2 + 4^2 = 20$

Given a set of number, state if each one is Armstrong or not.

Input

The input file will starts with a positive integer k represents the number of problem instances. Followed by n numbers, where $0 \leq n \leq 9999999$.

Output

For every problem instance, print out the instance number starting from 1, followed by a period '.' and "yes" if the number is an Armstrong number or "no" if it is not (without quotations).

Sample Input/Output

armstrong.in	OUTPUT
5	1. yes
1634	2. no
150	3. no
24	4. yes
407	5. no
10	