

Narcissistic Numbers

A number is narcissistic when the sum of its digits, with each digit raised to the power of digits quantity, is equal to the number itself.

$153 \rightarrow 3 \text{ digits} \rightarrow 1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153 \rightarrow \text{Narcissistic}$

$84 \rightarrow 2 \text{ digits} \rightarrow 8^2 + 4^2 = 64 + 16 = 80 \rightarrow \text{Not narcissistic}$

Your task is to write a program that, given a positive integer n , returns true if the number is narcissistic, and false if it's not.

Input

The first line of input contains a positive integer n .

Output

The first line contains "true" or "false".

Sample input

Sample output

153	true
84	False
8208	true