Carving Tiny Fractions

Time limit: 2.0s **Memory limit:** 256M

You are walking alone in the woods one night when out of the corner of your eye you see something moving. You turn and see a Large Russian Bear moving towards you.

It turns out this bear is writing a contest problem, and requires a list of Egyptian Fractions (reciprocals of positive integers) whose sum is extremely close to, but not *exactly*, equal to 1.

Input Format

You are given a single integer $v \in \{-1, 1\}$

Output Format

On the first line, output a single integer n, $1 \leq n \leq 1000$.

On the second line, output n integers, $1 \leq x_i \leq 10^{18}$.

Scoring

If your output is improperly formatted you will receive 0 points.

Otherwise, let $S = \sum_{i=1}^{n} \frac{1}{x_i}$. If $v = 1$ then you must have $S > 1$ or you will receive 0 points. Similarly, if $v = -1$ then you must have $S < 1$ or you will recieve 0 points.

If you have a valid submission, then you receive points according to the following table, where $T = -\log_{10}(|1 - S|)$

T	Score
$T < 30$	0
$30 \leq T < 50$	$3(T - 30)$
$50 \leq T < 100$	$60 + \frac{2(T-50)}{5}$
$100 \leq T < 500$	$80 + \frac{T-100}{20}$
$T \geq 500$	100