

Contest Duration: 2025-08-24(Sun) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250824T2100&p1=248>) - 2025-08-24(Sun) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250824T2240&p1=248>) (local time) (100 minutes)

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G - $\sqrt{n^2+n+X}$

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 575 points

Problem Statement

You are given an integer X .

Find all integers n such that $\sqrt{n^2 + n + X}$ is an integer.

Constraints

- $-10^{14} \leq X \leq 10^{14}$
- The input value is an integer.

Input

The input is given from Standard Input in the following format:

X

Output

Let N_1, N_2, \dots, N_K be the integers n such that $\sqrt{n^2 + n + X}$ is an integer, listed in ascending order (where K is the number of n satisfying the condition). Output the following format:

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K
 $N_1 \ N_2 \ \dots \ N_K$

Sample Input 1

Copy

4

Copy

Sample Output 1

Copy

4
-4 -1 0 3

Copy

There are four integers n such that $\sqrt{n^2 + n + 4}$ is an integer: $n = -4, -1, 0, 3$.

Sample Input 2

Copy

-10000

Copy

Sample Output 2

Copy

8
-10001 -773 -593 -101 100 592 772 10000

Copy

Sample Input 3

Copy

20250824

Copy

Sample Output 3

Copy

8
-20250824 -4050164 -13304 -884 883 13303 4050163 20250823

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#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc420%2Ftasks%2Fabc420_g%3Flang%3Den&title=G%20-

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