Contest Duration: 2025-07-12(Sat) 08:00 (http://www.timeanddate.com/worldclock/fixedtime.html?
iso=20250712T2100&p1=248) - 2025-07-12(Sat) 09:40 (http://www.timeanddate.com/worldclock/fixedtime.html?
iso=20250712T2240&p1=248) (local time) (100 minutes)   Back to Home (/home)

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E - Count A%B=C   Editorial (/contests/abc414/tasks/abc414_e/editorial)   🇯🇵 / 🇬🇧

Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 475 points

Problem Statement

Find the number, modulo 998244353, of integer tuples (a, b, c) that satisfy the following
conditions.

- $1 \le a, b, c \le N$
- a, b, c are pairwise distinct.
- The remainder when a is divided by b is equal to c.

Constraints

- $3 \le N \le 10^{12}$
- N is an integer.

Input

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

$$N$$

Output

Output the answer in one line.

Sample Input 1 [Copy]

```
7
```
[Copy]

Sample Output 1 [Copy]

```
12
```
[Copy]

There are 12 integer tuples (a, b, c) that satisfy the conditions:

- $(3, 2, 1)$
- $(4, 3, 1)$
- $(5, 2, 1)$
- $(5, 3, 2)$
- $(5, 4, 1)$
- $(6, 4, 2)$
- $(6, 5, 1)$
- $(7, 2, 1)$
- $(7, 3, 1)$
- $(7, 4, 3)$
- $(7, 5, 2)$
- $(7, 6, 1)$

Sample Input 2 [Copy]

```
441
```
[Copy]

Sample Output 2 [Copy]

```
94700
```
[Copy]

Sample Input 3   Copy

411111111114   Copy

Sample Output 3   Copy

462474062   Copy

Language

Python (CPython 3.11.4)   ▼

Source Code

📁 Open File | ⚙ Customize | Toggle Editor | Auto Height

1 |

* at most 512 KiB

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2025-07-15 (Tue)
22:36:24 -04:00

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