

Contest Duration: 2025-07-12(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250712T2100&p1=248>) - 2025-07-12(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250712T2240&p1=248>) (local time) (100 minutes)

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E - Count A% $B=C$

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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.

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

Constraints

- $3 \leq N \leq 10^{12}$
- 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](#)

2026-01-02 (Fri)

05:26:58 +11:00

Sample Output 3

Copy

462474062

Copy

'#telegram)

'url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc414%2Ftasks%2Fabc414_e%3Flang%3Den&title=E%20-

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