2538 - How Many Ways

Description

In how many ways can we choose some numbers from a set with N integers, so that their sum is a multiple of 3?

Input specification

The first line of input contains an integer number N, 1 <= N <= 1000. The second line of input contains N different space-separated non-negative integer numbers, the elements of the set. All those numbers are lower than 2^31-1.

Output specification

A single integer number, the amount of ways we can choose numbers, from the given set, so that their sums are a multiple of 3. The solution may be to big so output it modulo 10^9.

Sample input

```
3
1 3 2
```

Sample output

```
3
```

Hint(s)

We can choose: {3}, {1, 2} or {1, 2, 3}.

Source	Óscar Dávalos Orozco
Added by	**ymondelo20**
Addition date	2013-09-28
Time limit (ms)	45000
Test limit (ms)	1000
Memory limit (kb)	256000
Output limit (mb)	64

Size limit (bytes)	15000
Enabled languages	Bash C C# C++ Java Pascal Perl PHP Python Ruby Text