B. New Skateboard

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Max wants to buy a new skateboard. He has calculated the amount of money that is needed to buy a new skateboard. He left a calculator on the floor and went to ask some money from his parents. Meanwhile his little brother Yusuf came and started to press the keys randomly. Unfortunately Max has forgotten the number which he had calculated. The only thing he knows is that the number is divisible by 4.

You are given a string s consisting of digits (the number on the display of the calculator after Yusuf randomly pressed the keys). Your task is to find the number of substrings which are divisible by 4. A substring can start with a zero.

A substring of a string is a nonempty sequence of consecutive characters.

For example if string s is `124` then we have four substrings that are divisible by 4: `12`, `4`, `24` and `124`. For the string `04` the answer is three: `0`, `4`, `04`.

As input/output can reach huge size it is recommended to use fast input/output methods: for example, prefer to use `gets/scanf/printf` instead of `getline/cin/cout` in C++, prefer to use `BufferedReader/PrintWriter` instead of `Scanner/System.out` in `Java`.

Input

The only line contains string s ($1 \le |s| \le 3 \cdot 10^5$). The string s contains only digits from 0 to 9.

Output

Print integer a — the number of substrings of the string s that are divisible by 4.

Note that the answer can be huge, so you should use 64-bit integer type to store it. In `C++` you can use the `long long` integer type and in `Java` you can use `long` integer type.

Examples

input	Copy
124	
output	**Copy**
4	

input	Copy
04	
output	**Copy**
3	

input	Copy
5810438174	
output	**Copy**
9	