Problem B. Border

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

You are given a string $S[1 \dots n]$. We denote its substrings as $S[l \dots r]$, and when $l > r$, such substring is defined to be an empty string. Let

$$f(i,j) = \max\{k \mid 0 \le k \le j-i,\ S[i \dots i+k-1] = S[j-k+1 \dots j]\}.$$

Output $\sum_{1 \le i < j \le n} f(i,j)$.

The string S is generated in the following way. The values n and *seed* are the parameters of the generator.

```
long long seed;
for (int i = 1; i <= n; i++) {
    seed = (seed * 13331 + 23333) % 1000000007;
    s[i] = 'a' + (seed & 1);
}
```

Input

The first line contains two integers: n and *seed* ($1 \le n \le 10^6$, $0 \le seed \le 10^9 + 6$).

Output

Output the answer.

Example

standard input	standard output
10 233333	50