Dream

Input file:	`standard input`
Output file:	`standard output`
Time limit:	0.3 seconds
Memory limit:	4 megabytes

Old Man Ivan, hard working farmer, tired after a long day of beating the fields, he decided to go to bed.

Being a religious man, he was visited at night by Apostle in a dream. He promised Ivan that his next harvest will be rich, if the farmer is able to help him out with a problem that had been bothering the poor Apostle for a long time:

"Given K and X natural numbers, X even, find out the sum of the first K palindromes with X digits".

Because Apostle knows that Old Man Ivan is a mere mortal, he only wants the remainder of this sum when divided by **666013**.

Help Ivan solve the problem!

Input

The only line of the input will have K followed by X ($1 \leq X, K \leq 10^5$).

It is guaranteed that there exists at least K palindromes with X digits.

For tests worth 15 points, $X \leq 8$.

For tests worth 20 more points, $X \leq 18$.

For tests worth 35 more points, $X * K \leq 10^5$.

Output

The output will contain the answer requested by Apostle.

Example

standard input	standard output
3 4	3333

Note

The first 3 palindromes with 4 digits are 1001, 1111, 1221. The sum will be $1001 + 1111 + 1221 = 3333$.
Disclaimer : The Apostle in the story isn't one of the 12 Apostles, that's just his name.