EIUSAVING 1

Normally, interest rates for saving deposits depend on how long the deposits are (see the table below). Minh has N dong and want to deposit money for M months. Find out the maximum amount of money Minh can receive after M months. Interest will be added to account at the end of each period (not rounded).

Number of months	Interest rates (each 12 months)
1	3.90%
2	3.92%
3	3.95%
4	3.99%
5	4.04%
6	5.54%
7	5.72%
8	5.92%
9	6.14%
10	6.38%
11	6.64%
12	6.92%

Input

The first line contains 2 integers N, M ($0 < N \le 10^5$, $0 < M \le 1000$).

Output

The maximum amount of money (rounded to unit).

Sample

Input	Output
5000 4	5067
10000 14	10762