1393 - Cruel Mathematics Teacher I

Description

Bessie has returned to eighth grade in order to graduate. Its cruel math teacher wants students to calculate "Integer Powers". An integer power is the integer that results when a number N (1 <= N <= 2*10^9) is multiplied by itself again and again P times (1 <= P <= 10^5). For example, 2 to the power 3 = 2 * 2 * 2 (three times) = 8. Similarly 123456 to the power 88 = 123456 * 123456 * ... * 123456 (88 times) = 112998777041355901946796315362165897863538962259592494776233959 9 1 3 6 1 2 6 338726554732008419241434866369749984761007267768622707364028542 0 8 0 9 1 1 9 137661732552276882669649439212698322039630714482954407975198820 5 7 3 1 5 6 9 149843371847896954988632573820237156990021409228984285690571918 8 8 9 0 1 7 0 077242421824809464029073620096918805910493982446641633065520427 0 2 4 6 3 7 1 369911210651858441377533324772050927463779550833890473188417271 6714194 40898407102819460020873199616 when printing 70 characters per line. Write a program that calculates the P-th power of an integer N. It ensures that the response will have no more than 15000 digits. Print your solution 70 characters per line (except the last, which could be shorter). Of course, do not print leading zeros.

Input specification

Two space-separated integers: N and P.

Output specification

A single integer that is the result of the calculation. Print 70 characters per line except potentially the last line, which could be shorter.

Sample input

```
2 15
```

Sample output

```
32768
```

Hint(s)

Calculate 2 to the 15-th power.

Source	Xtreme Programming Problem Archive
Added by	**ejaltuna**
Addition date	2011-10-11 03:27:47.0
Time limit (ms)	40000
Test limit (ms)	4000
Memory limit (kb)	65536
Output limit (mb)	64
Size limit (bytes)	100000
Enabled languages	C C# C++ Java Pascal Perl PHP Python Ruby Text