

Problem 2 – Encoding Sum

You are given a text and a number (M). The text can contain any characters: (**digits**, **Latin letters** (both capital and letter case) or **any other symbols**). The character '@' is **special** – it marks the end of the text.

Your task is to iterate the text and to perform an operation for every character. Having a RESULT = 0, the operations are as follows:

- If the current character is '@', stop the program and print the value of RESULT
- If the current character is a digit ('0' – '9'), then multiply the RESULT by this digit
- If the current character is a letter, add its index from the Latin alphabet to RESULT.
 - 'A' has an index 0, 'B' has an index 1, etc...
- If the current character is a symbol, that is different from the ones described above, create module of the RESULT by the provided number (M)
- See the sample input/output for more detailed explanation

Input

The input data is given at the standard input.

It consists of two lines:

- The first one contains the number M, that is used for the module of the result
- The second line contains the text

The input will be valid, in the specified format, within the constraints given below. There is no need to check the input data explicitly.

Output

Print the result from the parsing (RESULT)

Constraints

- M will always be between 2000 and 10 000
- The length of the text will always be less than 100 000
- Allowed working time for your program: 0.5 seconds.
- Allowed memory: 16 MB.

Example

Input	Output	Description
2001 Hello .NET 5! My name is Peter 8-~@	518	RESULT = 0 + 7(H) = 7 RESULT = 7 + 4(e) = 11 RESULT = 11 + 11(1) = 22 RESULT = 22 + 11(1) = 33 RESULT = 33 + 14(o) = 47 RESULT = 47 % 2001() = 47 RESULT = 47 % 2001(.) = 47 RESULT = 47 + 13(N) = 60 RESULT = 60 + 4(E) = 64 RESULT = 64 + 19(T) = 83 RESULT = 83 % 2001() = 83

		$\begin{aligned} \text{RESULT} &= 83 * 5(5) = 415 \\ \text{RESULT} &= 415 \% 2001(!) = 415 \\ \text{RESULT} &= 415 \% 2001() = 415 \\ \text{RESULT} &= 415 + 12(M) = 427 \\ \text{RESULT} &= 427 + 24(y) = 451 \\ \text{RESULT} &= 451 \% 2001() = 451 \\ \text{RESULT} &= 451 + 13(n) = 464 \\ \text{RESULT} &= 464 + 0(a) = 464 \\ \text{RESULT} &= 464 + 12(m) = 476 \\ \text{RESULT} &= 476 + 4(e) = 480 \\ \text{RESULT} &= 480 \% 2001() = 480 \\ \text{RESULT} &= 480 + 8(i) = 488 \\ \text{RESULT} &= 488 + 18(s) = 506 \\ \text{RESULT} &= 506 \% 2001() = 506 \\ \text{RESULT} &= 506 + 15(P) = 521 \\ \text{RESULT} &= 521 + 4(e) = 525 \\ \text{RESULT} &= 525 + 19(t) = 544 \\ \text{RESULT} &= 544 + 4(e) = 548 \\ \text{RESULT} &= 548 + 17(r) = 565 \\ \text{RESULT} &= 565 \% 2001() = 565 \\ \text{RESULT} &= 565 * 8(8) = 4520 \\ \text{RESULT} &= 4520 \% 2001(-) = 518 \\ \text{RESULT} &= 518 \% 2001()) = 518 \end{aligned}$
2222 Starwars 4, 5 and 6 are better than 1, 2 and 3@	1332	$\begin{aligned} \text{RESULT} &= 0 + 18(S) = 18 \\ \text{RESULT} &= 18 + 19(t) = 37 \\ \text{RESULT} &= 37 + 0(a) = 37 \\ \text{RESULT} &= 37 + 17(r) = 54 \\ \text{RESULT} &= 54 + 22(w) = 76 \\ \text{RESULT} &= 76 + 0(a) = 76 \\ \text{RESULT} &= 76 + 17(r) = 93 \\ \text{RESULT} &= 93 + 18(s) = 111 \\ \text{RESULT} &= 111 \% 2222() = 111 \\ \text{RESULT} &= 111 * 4(4) = 444 \\ \text{RESULT} &= 444 \% 2222(,) = 444 \\ \text{RESULT} &= 444 \% 2222() = 444 \\ \text{RESULT} &= 444 * 5(5) = 2220 \\ \text{RESULT} &= 2220 \% 2222() = 2220 \\ \text{RESULT} &= 2220 + 0(a) = 2220 \\ \text{RESULT} &= 2220 + 13(n) = 2233 \\ \text{RESULT} &= 2233 + 3(d) = 2236 \\ \text{RESULT} &= 2236 \% 2222() = 14 \\ \text{RESULT} &= 14 * 6(6) = 84 \\ \text{RESULT} &= 84 \% 2222() = 84 \\ \text{RESULT} &= 84 + 0(a) = 84 \\ \text{RESULT} &= 84 + 17(r) = 101 \\ \text{RESULT} &= 101 + 4(e) = 105 \\ \text{RESULT} &= 105 \% 2222() = 105 \\ \text{RESULT} &= 105 + 1(b) = 106 \\ \text{RESULT} &= 106 + 4(e) = 110 \\ \text{RESULT} &= 110 + 19(t) = 129 \\ \text{RESULT} &= 129 + 19(t) = 148 \\ \text{RESULT} &= 148 + 4(e) = 152 \\ \text{RESULT} &= 152 + 17(r) = 169 \\ \text{RESULT} &= 169 \% 2222() = 169 \\ \text{RESULT} &= 169 + 19(t) = 188 \\ \text{RESULT} &= 188 + 7(h) = 195 \\ \text{RESULT} &= 195 + 0(a) = 195 \end{aligned}$

		$RESULT = 195 + 19(t) = 214$ $RESULT = 214 \% 2222() = 214$ $RESULT = 214 * 1(1) = 214$ $RESULT = 214 \% 2222(,) = 214$ $RESULT = 214 \% 2222() = 214$ $RESULT = 214 * 2(2) = 428$ $RESULT = 428 \% 2222() = 428$ $RESULT = 428 + 0(a) = 428$ $RESULT = 428 + 13(n) = 441$ $RESULT = 441 + 3(d) = 444$ $RESULT = 444 \% 2222() = 444$ $RESULT = 444 * 3(3) = 1332$
9999 My nickname, when I was 25, was Pencho8473848399 ;-)@	2943	$RESULT = 0 + 12(M) = 12$ $RESULT = 12 + 24(y) = 36$ $RESULT = 36 \% 9999() = 36$ $RESULT = 36 + 13(n) = 49$ $RESULT = 49 + 8(i) = 57$ $RESULT = 57 + 2(c) = 59$ $RESULT = 59 + 10(k) = 69$ $RESULT = 69 + 13(n) = 82$ $RESULT = 82 + 0(a) = 82$ $RESULT = 82 + 12(m) = 94$ $RESULT = 94 + 4(e) = 98$ $RESULT = 98 \% 9999(,) = 98$ $RESULT = 98 \% 9999() = 98$ $RESULT = 98 + 22(w) = 120$ $RESULT = 120 + 7(h) = 127$ $RESULT = 127 + 4(e) = 131$ $RESULT = 131 + 13(n) = 144$ $RESULT = 144 \% 9999() = 144$ $RESULT = 144 + 8(I) = 152$ $RESULT = 152 \% 9999() = 152$ $RESULT = 152 + 22(w) = 174$ $RESULT = 174 + 0(a) = 174$ $RESULT = 174 + 18(s) = 192$ $RESULT = 192 \% 9999() = 192$ $RESULT = 192 * 2(2) = 384$ $RESULT = 384 * 5(5) = 1920$ $RESULT = 1920 \% 9999(,) = 1920$ $RESULT = 1920 \% 9999() = 1920$ $RESULT = 1920 + 22(w) = 1942$ $RESULT = 1942 + 0(a) = 1942$ $RESULT = 1942 + 18(s) = 1960$ $RESULT = 1960 \% 9999() = 1960$ $RESULT = 1960 + 15(P) = 1975$ $RESULT = 1975 + 4(e) = 1979$ $RESULT = 1979 + 13(n) = 1992$ $RESULT = 1992 + 2(c) = 1994$ $RESULT = 1994 + 7(h) = 2001$ $RESULT = 2001 + 14(o) = 2015$ $RESULT = 2015 * 8(8) = 16120$ $RESULT = 16120 * 4(4) = 64480$ $RESULT = 64480 * 7(7) = 451360$ $RESULT = 451360 * 3(3) = 1354080$ $RESULT = 1354080 * 8(8) = 10832640$ $RESULT = 10832640 * 4(4) = 43330560$ $RESULT = 43330560 * 8(8) = 346644480$

		<p> <code>RESULT = 346644480 * 3(3) = 1039933440</code> <code>RESULT = 1039933440 * 9(9) = 9359400960</code> <code>RESULT = 9359400960 * 9(9) = 84234608640</code> <code>RESULT = 84234608640 % 9999() = 2943</code> <code>RESULT = 2943 % 9999(;) = 2943</code> <code>RESULT = 2943 % 9999(-) = 2943</code> <code>RESULT = 2943 % 9999() = 2943</code> </p>
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