

Problem 2 – Text to Number

You are given a text and a number (M). This text can contain **digits**, **Latin letters** (both capital and letter case) and **any other symbols, except for '@'**. The number is used to the parsing of the text.

Your task is to go through all characters of the text and, starting from **RESULT = 0**, to perform the following operations:

- If the current character is '@', stop the program and print the **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 number from the Latin alphabet to **RESULT**. 'A' is with number 0
- If the current character is a symbol, that is different from the ones above, create module of the **RESULT** by the provided number (M)

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 RESULT = 83 * 5(5) = 415 RESULT = 415 % 2001(!) = 415

		<p> $\text{RESULT} = 415 \% 2001() = 415$ $\text{RESULT} = 415 + 12(M) = 427$ $\text{RESULT} = 427 + 24(y) = 451$ $\text{RESULT} = 451 \% 2001() = 451$ $\text{RESULT} = 451 + 13(n) = 464$ $\text{RESULT} = 464 + 0(a) = 464$ $\text{RESULT} = 464 + 12(m) = 476$ $\text{RESULT} = 476 + 4(e) = 480$ $\text{RESULT} = 480 \% 2001() = 480$ $\text{RESULT} = 480 + 8(i) = 488$ $\text{RESULT} = 488 + 18(s) = 506$ $\text{RESULT} = 506 \% 2001() = 506$ $\text{RESULT} = 506 + 15(P) = 521$ $\text{RESULT} = 521 + 4(e) = 525$ $\text{RESULT} = 525 + 19(t) = 544$ $\text{RESULT} = 544 + 4(e) = 548$ $\text{RESULT} = 548 + 17(r) = 565$ $\text{RESULT} = 565 \% 2001() = 565$ $\text{RESULT} = 565 * 8(8) = 4520$ $\text{RESULT} = 4520 \% 2001(-) = 518$ $\text{RESULT} = 518 \% 2001() = 518$ </p>
<p>2222</p> <p>Starwars 4, 5 and 6 are better than 1, 2 and 3@</p>	1332	<p> $\text{RESULT} = 0 + 18(S) = 18$ $\text{RESULT} = 18 + 19(t) = 37$ $\text{RESULT} = 37 + 0(a) = 37$ $\text{RESULT} = 37 + 17(r) = 54$ $\text{RESULT} = 54 + 22(w) = 76$ $\text{RESULT} = 76 + 0(a) = 76$ $\text{RESULT} = 76 + 17(r) = 93$ $\text{RESULT} = 93 + 18(s) = 111$ $\text{RESULT} = 111 \% 2222() = 111$ $\text{RESULT} = 111 * 4(4) = 444$ $\text{RESULT} = 444 \% 2222(,) = 444$ $\text{RESULT} = 444 \% 2222() = 444$ $\text{RESULT} = 444 * 5(5) = 2220$ $\text{RESULT} = 2220 \% 2222() = 2220$ $\text{RESULT} = 2220 + 0(a) = 2220$ $\text{RESULT} = 2220 + 13(n) = 2233$ $\text{RESULT} = 2233 + 3(d) = 2236$ $\text{RESULT} = 2236 \% 2222() = 14$ $\text{RESULT} = 14 * 6(6) = 84$ $\text{RESULT} = 84 \% 2222() = 84$ $\text{RESULT} = 84 + 0(a) = 84$ $\text{RESULT} = 84 + 17(r) = 101$ $\text{RESULT} = 101 + 4(e) = 105$ $\text{RESULT} = 105 \% 2222() = 105$ $\text{RESULT} = 105 + 1(b) = 106$ $\text{RESULT} = 106 + 4(e) = 110$ $\text{RESULT} = 110 + 19(t) = 129$ $\text{RESULT} = 129 + 19(t) = 148$ $\text{RESULT} = 148 + 4(e) = 152$ $\text{RESULT} = 152 + 17(r) = 169$ $\text{RESULT} = 169 \% 2222() = 169$ $\text{RESULT} = 169 + 19(t) = 188$ $\text{RESULT} = 188 + 7(h) = 195$ $\text{RESULT} = 195 + 0(a) = 195$ $\text{RESULT} = 195 + 19(t) = 214$ $\text{RESULT} = 214 \% 2222() = 214$ </p>

		$RESULT = 214 * 1(1) = 214$ $RESULT = 214 \% 2222(,) = 214$ $RESULT = 214 \% 2222() = 214$ $RESULT = 214 * 2(2) = 428$ $RESULT = 428 \% 2222() = 428$ $RESULT = 428 + 0(a) = 428$ $RESULT = 428 + 13(n) = 441$ $RESULT = 441 + 3(d) = 444$ $RESULT = 444 \% 2222() = 444$ $RESULT = 444 * 3(3) = 1332$
9999 My nickname, when I was 25, was Pencho8473848399 ;-)@	2943	$RESULT = 0 + 12(M) = 12$ $RESULT = 12 + 24(y) = 36$ $RESULT = 36 \% 9999() = 36$ $RESULT = 36 + 13(n) = 49$ $RESULT = 49 + 8(i) = 57$ $RESULT = 57 + 2(c) = 59$ $RESULT = 59 + 10(k) = 69$ $RESULT = 69 + 13(n) = 82$ $RESULT = 82 + 0(a) = 82$ $RESULT = 82 + 12(m) = 94$ $RESULT = 94 + 4(e) = 98$ $RESULT = 98 \% 9999(,) = 98$ $RESULT = 98 \% 9999() = 98$ $RESULT = 98 + 22(w) = 120$ $RESULT = 120 + 7(h) = 127$ $RESULT = 127 + 4(e) = 131$ $RESULT = 131 + 13(n) = 144$ $RESULT = 144 \% 9999() = 144$ $RESULT = 144 + 8(I) = 152$ $RESULT = 152 \% 9999() = 152$ $RESULT = 152 + 22(w) = 174$ $RESULT = 174 + 0(a) = 174$ $RESULT = 174 + 18(s) = 192$ $RESULT = 192 \% 9999() = 192$ $RESULT = 192 * 2(2) = 384$ $RESULT = 384 * 5(5) = 1920$ $RESULT = 1920 \% 9999(,) = 1920$ $RESULT = 1920 \% 9999() = 1920$ $RESULT = 1920 + 22(w) = 1942$ $RESULT = 1942 + 0(a) = 1942$ $RESULT = 1942 + 18(s) = 1960$ $RESULT = 1960 \% 9999() = 1960$ $RESULT = 1960 + 15(P) = 1975$ $RESULT = 1975 + 4(e) = 1979$ $RESULT = 1979 + 13(n) = 1992$ $RESULT = 1992 + 2(c) = 1994$ $RESULT = 1994 + 7(h) = 2001$ $RESULT = 2001 + 14(o) = 2015$ $RESULT = 2015 * 8(8) = 16120$ $RESULT = 16120 * 4(4) = 64480$ $RESULT = 64480 * 7(7) = 451360$ $RESULT = 451360 * 3(3) = 1354080$ $RESULT = 1354080 * 8(8) = 10832640$ $RESULT = 10832640 * 4(4) = 43330560$ $RESULT = 43330560 * 8(8) = 346644480$ $RESULT = 346644480 * 3(3) = 1039933440$ $RESULT = 1039933440 * 9(9) = 9359400960$

		$\text{RESULT} = 9359400960 * 9(9) = 84234608640$ $\text{RESULT} = 84234608640 \% 9999() = 2943$ $\text{RESULT} = 2943 \% 9999(;) = 2943$ $\text{RESULT} = 2943 \% 9999(-) = 2943$ $\text{RESULT} = 2943 \% 9999() = 2943$
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