Hamster and Multiplication

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

ZSGW is a cute hamster studying in Wuhan Hamster University (A.k.a. WHU). He finds it difficult to learn math courses such as advanced mathematics, because he even misunderstands the definition of multiply operation!

ZSGW can only correctly multiply numbers when the result has only one digit (like $2 \times 4 = 8$). When the result has multiple digits (i.e. the result is not less than 10), for example, calculating 7×2, things would get wrong. We all know the result should be 14, but hamster will regard 14 as 1×4, so the result of 7×2 would be 4. He will repeat this procedure until the result has only one digit, and this is how ZSGW calculate 8×9: $8 \times 9 = 72 = 7 \times 2 = 14 = 1 \times 4 = 4$.

The reason is that ZSGW cannot understand numbers larger than 9. For numbers with multiple digits, ZSGW will regard the number as the result of multiplying the digits together (according to his own definition of multiplication). Formally, let $f(x)$ be the value that ZSGW thinks the x is. Then here is an example:

$f(266) = f(2 \times 6 \times 6) = f(72) = f(7 \times 2) = f(14) = f(1 \times 4) = f(4) = 4$

Here is a more precise definition of $f(x)$:

$$f(x) = \begin{cases} x & (x < 10) \\ f(\prod_i x_i) & (x \geq 10) \end{cases}$$

Where x_i refers to the i-th digit of x.

Now here comes the final question: Given a number n, you need to calculate the sum of this function from 1 to n.

That is: Calculate $\sum_{i=1}^{n} f(i)$.

Input

A single number n ($1 \leq n < 10^{18}$) whose description is on the above.

Output

A single number *ans* in a line as the answer.

Examples

standard input	standard output
5	15
22	96
522	1788
522522	366166

Note

$f(266) = f(2 \times 6 \times 6) = f(72) \neq f(f(12) \times 6)$