

C. Book Reading

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Polycarp is reading a book consisting of n pages numbered from 1 to n . Every time he finishes the page with the number divisible by m , he writes down the last digit of this page number. For example, if $n = 15$ and $m = 5$, pages divisible by m are 5, 10, 15. Their last digits are 5, 0, 5 correspondingly, their sum is 10.

Your task is to calculate the sum of all digits Polycarp has written down.

You have to answer q independent queries.

Input

The first line of the input contains one integer q ($1 \leq q \leq 1000$) — the number of queries.

The following q lines contain queries, one per line. Each query is given as two integers n and m ($1 \leq n, m \leq 10^{16}$) — the number of pages in the book and required divisor, respectively.

Output

For each query print the answer for it — the sum of digits written down by Polycarp.

Example

input	Copy
<pre>7 1 1 10 1 100 3 1024 14 998244353 1337 123 144 1234312817382646 13</pre>	
output	Copy
<pre>1 45 153 294 3359835 0 427262129093995</pre>	

Codeforces Round #582 (Div. 3)

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You can clone this contest to a mashup.

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 Language: GNU G++11 5.1.0

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→ Contest materials

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- Announcement #2 (en) 
- Tutorial #1 (en) 
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