

Sum of Fibonacci numbers

Given the i th ($1 \leq i \leq 35$) Fibonacci number F_i calculate the sum of the i th till $i+9$ th number $F_i + F_{i+1} + \dots + F_{i+9}$ and the last digit of the $i+246$ th one F_{i+246} .

Be careful: Your solution mustn't exceed 111 bytes. But rather half of it should be more than enough.

Score is source length.

Input

In the first line the number of testcases $N \leq 100$, then N lines with one positive integer i .

Output

One line with " $F_i + F_{i+1} + \dots + F_{i+9} + \text{last digit of } F_{i+246}$ " for each i .

Example

Input:

```
2
1
35
```

Output:

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146
1821381552
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