UVa Online Judge

11260 Odd Root Sum

Given the value of an n you will have to find the modulo 100000000 value of the following expression:

$$\lfloor\sqrt{1}\rfloor + \lfloor\sqrt{3}\rfloor + \lfloor\sqrt{5}\rfloor + \ldots + \lfloor\sqrt{2i-1}\rfloor + \ldots + \lfloor\sqrt{m}\rfloor,$$

where m is the largest odd number not greater than n.

Or in other words you will have to find the value of S where,

$$S = (\lfloor\sqrt{1}\rfloor + \lfloor\sqrt{3}\rfloor + \lfloor\sqrt{5}\rfloor + \ldots + \lfloor\sqrt{m}\rfloor) \bmod 100000000$$

Input

The input file contains at most 30000 lines of inputs. Each line contains a single 64-nit signed integer which denotes the value of n. Input is terminated by a line containing a single zero which should not be processed.

Output

For each line of input produce one line of output. This line contains the value of S.

Sample Input

```
9
19
29
10000000
0
```

Sample Output

```
9
26
49
38426378
```