Problem: *The Utopian Tree:*

The Utopian Tree goes through *2* cycles of growth every year. Each spring, it *doubles* in height. Each summer, its height increases by *1* meter.
Laura plants a Utopian Tree sapling with a height of *1* meter at the onset of spring. How tall will her tree be after growth cycles?

Input Format

The first line contains an integer, , the number of test cases.
 subsequent lines each contain an integer, , denoting the number of cycles for that test case.

Constraints

Output Format

For each test case, print the height of the Utopian Tree after cycles. Each height must be printed on a new line.

Sample Input

```
3
0
1
4
```

Sample Output

```
1
2
7
```

Explanation

There are *3* test cases.
In the first case (), the initial height () of the tree remains unchanged.
In the second case (), the tree doubles in height and is meters tall after the spring cycle.
In the third case (), the tree doubles its height in spring (), then grows a meter in summer (), then doubles after the next spring (), and grows another meter after summer (). Thus, at the end of 4 cycles, its height is meters.

Solution:

```
int main()
   {
      int cases, cycle;
      cin>>cases;

      for(int i=0; i<cases; i++)
         {
            cin>> cycle;
            int length=1;
            for(int i=0; i<cycle; i++)
               {(i%2==0 ? length=2*length : length+=1);}
            cout<<length<<endl;
         }

      return 0;
   }
```

- Anshul Aggarwal