Project Euler #16: Power digit sum

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Problem Submissions Leaderboard Discussions

This problem is a programming version of Problem 16 from projecteuler.net

$2^9 = 512$ and the sum of its digits is $5 + 1 + 2 = 8$.

What is the sum of the digits of the number 2^N ?

Input Format

The first line contains an integer T, i.e., number of test cases.
Next T lines will contain an integer N.

Constraints

- $1 \leqslant T \leqslant 100$
- $1 \leqslant N \leqslant 10^4$

Output Format

Print the values corresponding to each test case.

Sample Input

```
3
3
4
7
```

Sample Output

```
8
7
11
```

Explanation

- $2^3 \Rightarrow 8$, sum of digits is 8.
- $2^4 \Rightarrow 16$, sum of digits is 7.
- $2^7 \Rightarrow 128$, sum of digits is 11.

Submissions: 7090
Max Score: 100
Difficulty: Easy

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Current Buffer (saved locally, editable) Java 8

```
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution.
   */
```