This problem is a programming version of[Problem 16](https://projecteuler.net/problem=16)from[projecteuler.net](https://projecteuler.net/)

 2^9 is 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  N lines will contain an integer .

**Constraints**

* 1 <= T <= 100
* 1 <= N <= 10^4

**Output Format**

Print the values corresponding to each test case.

**Sample Input**

3

3

4

7

**Sample Output**

8

7

11

**Explanation**

* 8, sum of digits is 8.
* 16, sum of digits is 7.
* 128, sum of digits is 11.