

# Pell Number

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Pell numbers are numbers that are similar to the Fibonacci numbers and are generated by below formula

$$P_n = 2 * P_{n-1} + P_{n-2}$$

with seeds  $P_0 = 0$  and  $P_1 = 1$

Your task is to print Nth pell number.

## Input:

First line consists of T test cases. Only line of every test case consists of N.

## Output:

Single line output, print the Nth pell number.

## Constraints:

$$1 \leq T \leq 100$$

$$1 \leq N \leq 100$$

## Example:

### Input:

1

4

### Output:

12