

# Special String

A string of letters X, Y, Z is special if there are three consecutive letters from which one is X, one is Y, and one is Z. For example, XYZXYZ is special, while XXYYZ is not. Your task is to calculate how many such strings of length n are not special.

## Input

First line contains an integer T ( $1 \leq T \leq 30$ ) which denotes the total number of test cases. Each test case contains an integer N ( $1 \leq N \leq 30$ ) in a single line.

## Output

For each test case print total number of strings which have a length N and are not special.

## Example

**Input:**

1  
2

**Output:**

9