

# Recursive function

Alice loves mathematics. She recently got a laptop and so is excited to solve her crazy mathematics problems using her Lappy.

One day, she discovered something known as RecursiveSum. RecursiveSum is a recursive function defined as:

1.  $\text{RecursiveSum}(0, n) = n$ , for all  $n > 0$ .
2.  $\text{RecursiveSum}(k, n) = \text{RecursiveSum}(k - 1, 1) + \text{RecursiveSum}(k - 1, 2) + \dots + \text{RecursiveSum}(k - 1, n)$ , for all positive  $k, n$ .

She wants to make a program that can find recursive sum for any given pairs of  $k$  and  $n$ . She has no coding experience yet, so she wants you to solve this problem for her. Given  $k$  and  $n$ , your task is to write a code that can return the value for  $\text{RecursiveSum}(k, n)$ .

## Input

First line of input consists of an integer  $T \leq 200$  which is the number of test cases. Each test case consists of two integers  $k$  and  $n$  ( $1 \leq k \leq 14$  and  $1 \leq n \leq 14$ ).

## Output

For each test case, output a single line containing the integer  $\text{RecursiveSum}(k, n)$ . The output is guaranteed to fit in 32-bit integer.

## Example

### Input:

```
4
1 3
5 1
4 10
8 6
```

### Output:

```
6
1
2002
2002
```