

12022 Ordering T-shirts

Working in a boutique folding and putting in order T-shirts according to their sizes seems very easy. But is it really so simple?

Given n objects of different sizes, how many different arrangements can be done using relationships ' $<$ ' and ' $=$ '?

For instance, with 2 objects, A and B, we have 3 possible arrangements:

A=B A<B B<A

With 3 objects, A, B and C, you must conclude that 13 different arrangements exist:

A=B=C A=B<C A<B=C A<B<C A<C<B A=C<B B<A=C B<A<C B<C<A B=C<A
C<A=B C<A<B C<B<A

Input

The first line of the input contains an integer, t , indicating the number of test cases. For each test case, one line appears, that contains a number n , $1 \leq n \leq 11$, representing the number of objects.

Output

For each test case, the output should contain a single line with the number representing the different arrangements you can do with n objects.

Sample Input

4
1
2
3
4

Sample Output

1
3
13
75