Problem B. Colored Boxes

Time limit   1000 ms

Mem limit   65536 kB

Arif has N cardboard boxes and he wants to paint them in three colors (red, yellow, and green). However, he does not want any two adjacent boxes to be painted the same color.

You must find how many different ways Arif can paint the boxes.

Input

The number of cardboard boxes Arif wants to paint ranges from N (1 ≤ N ≤ 50).

Output

The number of possible ways to paint the boxes.

Example

Input	Output
3	12