



Viral Advertising

by Shafaet

Problem

Submissions

Leaderboard

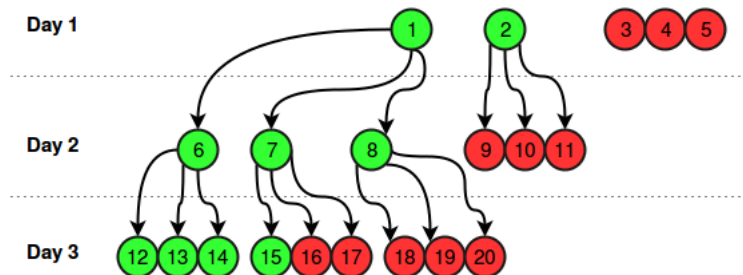
Discussions

Editorial

HackerLand Enterprise is adopting a new viral advertising strategy. When they launch a new product, they advertise it to exactly **5** people on social media.

On the first day, half of those **5** people (i.e., $\text{floor}(\frac{5}{2}) = 2$) like the advertisement and each person shares it with **3** of their friends; the remaining people (i.e., $5 - \text{floor}(\frac{5}{2}) = 3$) delete the advertisement because it doesn't interest them. So, at the beginning of the second day, $\text{floor}(\frac{5}{2}) \times 3 = 2 \times 3 = 6$ people receive the advertisement.

On the second day, half of the **6** people who received the advertisement share it with **3** new friends. So, at the beginning of the third day, $\text{floor}(\frac{6}{2}) \times 3 = 3 \times 3 = 9$ people receive the advertisement. The diagram below depicts the advertisement's virality over the first three days (green denotes a person that likes the advertisement and red denotes a person that disliked and deleted it):



Assume that at the beginning of the i^{th} day, m people received the advertisement, $\text{floor}(\frac{m}{2})$ people like and share it with **3** new friends, and $m - \text{floor}(\frac{m}{2})$ people dislike and delete it. At the beginning of the $(i + 1)^{\text{th}}$ day, $\text{floor}(\frac{m}{2}) \times 3$ people receive the advertisement.

Given an integer, n , find and print the total number of people who *liked* HackerLand Enterprise's advertisement during the first n days. It is guaranteed that no two people have any friends in common and, after a person shares the advertisement with a friend, the friend always sees it the next day.

Input Format

A single integer, n , denoting a number of days.

Constraints

- $1 \leq n \leq 50$

Output Format

Print the number of people who liked the advertisement during the first n days.

Sample Input

3

Sample Output

9

Explanation

This example is depicted by the diagram at the top of the challenge. **2** people liked the advertisement on the first day, **3** people liked the advertisement on the second day and **4** people liked the advertisement on the third day, so the answer is **2 + 3 + 4 = 9**.

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Max Score: 15

Difficulty: Easy

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☆☆☆☆☆

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Java 7  

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

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