Computer Practicum 1: C Homework 02
Fall Semester AY 2020-2021

Instructions: Submit a program following the format surname_firstname_homework02.c (example: `Deja_Jordan_homework02.c`). No need for a compressed/zipped/archived file. Just submit the .c file in e-classroom. Absolutely no extensions or special submissions will be allowed.

On Grading: The programs will be graded based on the following criteria:

- Correctness of Solution (max 6 points): The program will be given a grade of 6-full points if it runs properly, and it runs the expected output given the specified inputs. A grade of 3 points will be given if the program runs successfully but may have issues in the expected output or has issues with the specified inputs. A grade of 1-full point will be given to any other submission that does not comply to the specified requirements above. Be very creative in your solutions. If there are already existing solutions, we challenge you to use a more diverse approach.
- Code Documentation (max 2 points): A submission will be given a grade of 2-full points if there are descriptive comments (not obvious ones) that describe the logic behind functions, headers, variables and other parts of the code. The author of the code and their ID number must also be specified. No points will be given for absence/lack of comments.
- Variable/Constant Name (max 2 points): A submission will be given a grade of 2-full points if there ALL variables are defined in a hungarian notation (or a rather similar naming convention). Hungarian notation and descriptive identifier names will be appreciated. We shall also look at cases where similar data types are arranged by type and if some important identifiers have an initialized value. No points will be given for absence/lack of comments.
- On creativity: The instructor may give you a bonus of 2 points if you have implemented a rather “creative” or “unique” solution. This is based on the ultimate preference of the instructor.
- Scoring: 6 + 2 + 2 = 10 points. +2 (bonus). Gain as much as 12/10.

Take the time to solve and enhance your skills. This homework is due by 14th January 2359. Goodluck!

Proceed to the next page for the set of problems.

Homework02.c

Given a positive integer N, what is the minimum positive integer K such that $K!$ is a multiple of the square of $N!$?

Note that a is a multiple of b if $a = b \cdot k$ for some integer k.

Moreover, note that for any positive integer M, $M!$ is the product of all positive integers whose value is at most M.

Input

The first line of input contains T, the number of test cases. The following lines describe the test cases.

Each test case consists of one line containing a single integer, N.

Output

For each test case, print a single integer which is the answer for that test case.

Constraints

$1 \leq T \leq 200000$
$1 \leq N \leq 200000$

Sample Input	Sample Output
5 4 5 7 11 24	8 10 14 22 48

END OF HOMEWORK. Goodluck!