



(https://www.codechef.com/certification/about?utm\_source=website&utm\_medium=adstrip&utm\_campaign=jan20-adstrip)  
(Home (/) » Compete (/contests) » October Challenge 2018 Division 2 (OCT18D2) » Chef and Serves)

# Chef and Serves

Problem Code: **CHSERVE**

Submit (Practice) (/submit/CHSERVE)



Tweet   19 people like this. Sign Up to see what your friends like.

All submissions for this problem are available.###Read problems statements [Hindi](http://www.codechef.com/download/translated/OCT18/hindi/CHSERVE.pdf) (<http://www.codechef.com/download/translated/OCT18/hindi/CHSERVE.pdf>), [Bengali](http://www.codechef.com/download/translated/OCT18/bengali/CHSERVE.pdf) (<http://www.codechef.com/download/translated/OCT18/bengali/CHSERVE.pdf>), [Mandarin chinese](http://www.codechef.com/download/translated/OCT18/mandarin/CHSERVE.pdf) (<http://www.codechef.com/download/translated/OCT18/mandarin/CHSERVE.pdf>), [Russian](http://www.codechef.com/download/translated/OCT18/russian/CHSERVE.pdf) (<http://www.codechef.com/download/translated/OCT18/russian/CHSERVE.pdf>) and [Vietnamese](http://www.codechef.com/download/translated/OCT18/vietnamese/CHSERVE.pdf) (<http://www.codechef.com/download/translated/OCT18/vietnamese/CHSERVE.pdf>) as well.

In a regular table tennis match, the player who serves changes every time after 2 points are scored, regardless of which players scored them.

Chef and Cook are playing a different match — they decided that the player who serves would change every time after  $K$  points are scored instead (again regardless of which players scored them). When the game starts, it's Chef's turn to serve.

You are given the current number of points scored by Chef and Cook ( $P_1$  and  $P_2$  respectively). Find out whether Chef or Cook has to serve next.

## Input

- The first line of the input contains a single integer  $T$  denoting the number of test cases. The description of  $T$  test cases follows.
- The first and only line of each test case contains three space-separated integers  $P_1$ ,  $P_2$  and  $K$ .

## Output

For each test case, print a single line containing the string "CHEF" if it is Chef's turn or "COOK" if it is Cook's turn.

## Constraints

- $1 \leq T \leq 10^5$
- $1 \leq K \leq 10^9$
- $0 \leq P_1, P_2 \leq 10^9$

## Subtasks

**Subtask #1 (100 points):** original constraints

## Example Input

My Submissions (/OCT18B/status/CHSERVE, #OCT18B status)  
All Submissions (/OCT18B/status/CHSERVE, #OCT18B status)

**Successful Submissions**



```
3
1 3 2
0 3 2
34 55 2
```

## Example Output

```
CHEF
COOK
CHEF
```

## Explanation

**Example case 1:** Chef serves for the first two points, Cook serves for the next two, so Chef has to serve again now.

Author: 4★ [abdul135 \(/users/abdul135/\)](/users/abdul135/)

Tags: [abdul135 \(/tags/problems/abdul135/\)](/tags/problems/abdul135/)

Date Added: 17-09-2018

Time Limit: 1 secs

Source Limit: 50000 Bytes

Languages: C, CPP14, JAVA, PYTH, PYTH 3.6, PYPY, CS2, PAS fpc, PAS gpc, RUBY, PHP, GO, NODEJS, HASK, rust, SCALA, swift, D, PERL, FORT, WSPC, ADA, CAML, ICK, BF, ASM, CLPS, PRLG, ICON, SCM qobi, PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, kotlin, PERL6, TEXT, SCM chicken, PYP3, CLOJ, COB, FS

[Submit \(Practice\) \(/submit/CHSERVE\)](/submit/CHSERVE)

## Comments ▶

[CodeChef is a non-commercial competitive programming community.](#)

[About CodeChef \(http://www.codechef.com/aboutus/\)](http://www.codechef.com/aboutus/) [About Directi \(http://www.directi.com/\)](http://www.directi.com/) [CEO's Corner \(http://www.codechef.com/ceoscorner/\)](http://www.codechef.com/ceoscorner/)  
[C-Programming \(http://www.codechef.com/c-programming/\)](http://www.codechef.com/c-programming/) [Programming Languages \(http://www.codechef.com/Programming-Languages/\)](http://www.codechef.com/Programming-Languages/) [Contact Us \(http://www.codechef.com/contactus/\)](http://www.codechef.com/contactus/)

© 2009 [Directi Group \(http://directi.com/\)](http://directi.com/). All Rights Reserved. CodeChef uses SPOJ © by [Sphere Research Labs \(http://www.sphere-research.com/\)](http://www.sphere-research.com/)  
In order to report copyright violations of any kind, send in an email to [copyright@codechef.com \(mailto:copyright@codechef.com\)](mailto:copyright@codechef.com).

**Directi** [. \(http://directi.com\)](http://directi.com)  
Intelligent People. Uncommon Ideas.  
The time now is: 10:11:37 PM  
Your IP: 117.194.73.62

### [CodeChef \(http://www.codechef.com/\)](http://www.codechef.com/) - A Platform for Aspiring Programmers

CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms**, **binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

### [Practice Section \(https://www.codechef.com/problems/easy\)](https://www.codechef.com/problems/easy) - A Place to hone your 'Computer Programming Skills'

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

### [Compete \(https://www.codechef.com/problems/easy\)](https://www.codechef.com/problems/easy) - Monthly Programming Contests and Cook-offs

Here is where you can show off your **computer programming skills**. Take part in our 10 day long monthly coding contest and the shorter format Cook-off **coding contest**. Put yourself up for recognition and win great prizes. Our **programming contests** have prizes worth up to INR 20,000 (for Indian Community), \$700 (for Global Community) and lots more CodeChef goodies up for grabs.

### Programming Tools

[Online IDE \(https://www.codechef.com/ide\)](https://www.codechef.com/ide)  
[Upcoming Coding Contests \(http://www.codechef.com/contests#FutureContests\)](http://www.codechef.com/contests#FutureContests)  
[Contest Hosting \(http://www.codechef.com/hostryourcontest\)](http://www.codechef.com/hostryourcontest)

### Practice Problems

[Easy \(https://www.codechef.com/problems/easy\)](https://www.codechef.com/problems/easy)  
[Medium \(https://www.codechef.com/problems/medium\)](https://www.codechef.com/problems/medium)  
[Hard \(https://www.codechef.com/problems/Hard\)](https://www.codechef.com/problems/Hard)