

A. King Moves

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

The only king stands on the standard chess board. You are given his position in format "cd", where *C* is the column from 'a' to 'h' and *d* is the row from '1' to '8'. Find the number of moves permitted for the king.

Check the king's moves here [https://en.wikipedia.org/wiki/King_\(chess\)](https://en.wikipedia.org/wiki/King_(chess)).

King moves from the position e4

Input

The only line contains the king's position in the format "cd", where 'c' is the column from 'a' to 'h' and 'd' is the row from '1' to '8'.

Output

Print the only integer *X* — the number of moves permitted for the king.

Example

input

e4

output

8

Educational Codeforces Round 16

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

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→ Problem tags

implementation

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 