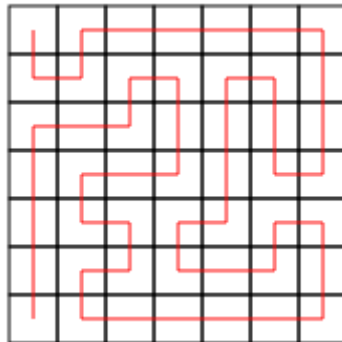


Grid Path

Time limit : 2s
Memory limit: 100 MB

There are 88418 paths in a 7×7 grid from the upper-left square to the lower-left square. Each path corresponds to a 48-character description consisting of characters D (down), U (up), L (left) and R (right).

For example, the path:



corresponds to the description:

DRURRRRRDDDLUULDDDLDRRURDDL LLLURULURRUULDLLDDDD.

You are given a description of a path which may also contain characters "?" (any direction). Your task is to calculate the number of paths that match the description.

Input

The only input line has a 48-character string of characters ?, D, U, L and R.

Output

Print one integer: the total number of paths.

Sample Input
??????R??????U????????????????????????LD????D?
Sample Output
201