DWITE '08 R1 #3 - School's a maze

Time limit: 1.0s **Memory limit:** 64M

DWITE Online Computer Programming Contest, October 2008, Problem 3

```
#########A#########
#...#.........#...#
#...#.#######.#...#
#..B#.#FGHIJ#.#E..#
#.................#
#####.#######.#####
#.....#.....#.....#
#..C#.#.....#.#D..#
#...#.#.....#.#...#
#####K#######L#####
```

Given this overly imaginative layout of a tiny 5 room (1 of which happens to be missing a door) floorplan; letters `ABCDEFGHIJKL` mark the points of interest. Given a daily schedule, as a sequence of letters, how much would one have to walk, while taking the most optimal paths?

Walking is done on `.` (period)s and letters. There is no diagonal movement. *For reference:* distance between `B` to `F` is 6. From `F` to `J` is 4. And so the path `BFJE` will be 16. If a letter is consecutively followed by itself (such as `BB`), the distance is 0.

The input will contain 10 lines, a copy of the **same map** as presented above. It will be followed by 5 more lines, each a string made up of mentioned capital letters (`ABCDEFGHIJKL`), $1 \leq N < 20$ in length, describing the schedule.

The output file will contain 5 lines – optimal distance travelled, for the plan specified.

Sample Input

```
#########A#########
#...#.........#...#
#...#.#######.#...#
#..B#.#FGHIJ#.#E..#
#.................#
#####.#######.#####
#.....#.....#.....#
#..C#.#.....#.#D..#
#...#.#.....#.#...#
#####K#######L#####
A
ABBB
ABCK
FGHIJ
KEBK
```

Sample Output

```
0
11
25
4
38
```

Problem Resource: DWITE