
Hide and Seek

X69278_en

Hide and Seek is a children's game in which players hide and one player (the seeker) tries to find them. In one version of the game, the seeker starts at a base, and to catch a player the seeker has to physically tag them. The players hiding can make themselves safe by touching the base before being tagged.

Alan is playing Hide and Seek, and he wants to know whether he should run for the base or stay at his present location. Whenever Alan runs for the base, the seeker (Kate) can see him and will also start running towards the base. Alan and Kate run at the same speed, and if Kate reaches the base before Alan, she will tag Alan before he touches the base (in case of a tie, Kate still has time to tag Alan).

Input

The input starts with the number of test cases $T \leq 100$. For each test case, there is an integer N , $3 \leq N \leq 100$, representing the size of the map ($N \times N$). The next N lines describe the map, where `.` is an empty space, `X` is an obstacle, `B` is the base, `A` is Alan's location, and `K` is Kate's location. Alan and Kate can only run in a horizontal or vertical direction, not diagonally, and you may assume both can reach the base.

Output

For each test case, output "RUN" or "STAY" according to Alan's best strategy.

Problem information

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