

7. Rock-Paper-Scissors (mang)

60 seconds

50 points

The rock-paper-scissors game is played as follows: Two players simultaneously pick their moves as ‘rock’, ‘paper’, or ‘scissors’. When both pick the same move, they each get zero points. When they pick different moves, the rock beats the scissors, the scissors beat the paper, and the paper beats the rock. The player who picked the winning move gets +1 and the loser –1 points. A match consists of a number of moves whose points are added. Thus, the sum of points of the two players at the end of a match will always be zero.

There are many rock-paper-scissors competitions where the main goal is to guess the opponent’s strategy and play against it.

Task. The jury has implemented 10 simple programs that play rock-paper-scissors. Write a program to play against them and score as many points as possible.

Match. Your program is started anew for each opponent. Your program should write its move, followed by a newline, to the standard output and then read the opponent’s move from the standard input. Each move is designated by a capital letter: K (rock), P (paper), or R (scissors). The match is managed by a judge program that gets the moves of the jury’s program in the same way and keeps track of the score. The end of the match is signaled by L as the opponent’s move and after that your program should terminate immediately.

Time limit. Each match lasts for 100,000 moves or for 1 minute, whichever limit is reached first. Thus, your program has a chance to score more by playing faster. You may assume that the jury’s program runs very fast. You may also assume that the strategy of the jury’s program can be deduced with reasonable effort.

Grading. The scores of all matches of your program are added. If the total is negative, your score for this task is zero. The contestant with the best result gets 50 points, other contestants with positive results will score proportionally.