

Project: Five, Six, Pick up Sticks.

Write a program that allows the user to challenge the computer to a game of Pick-up-Sticks. Here is how the game works. The user chooses the number of matchsticks (from 5 to 50) to place in a pile. Then, the computer chooses who will go first. At each turn, the contestant can remove one, two, or three matchsticks from the pile. The contestant who chooses the last matchstick loses. The computer should make the user always select from a pile where the number of matchsticks has a remainder of 1 when divided by 4. For instance, if the user initially chooses a number of matchsticks that has a remainder of 1 when divided by 4, then the computer should have the user go first. Otherwise, the computer should go first and remove the proper number of matchsticks. After writing the program, play a few games with the computer and observe that the computer always wins.

