

## DISCUSSION FOR SIXTH TUTORIAL

DATE: DECEMBER 2 AND JANUARY 6 (POSTED JANUARY 5)

Peter and Paul are playing a game involving 60 plastic sticks that are on the table between them. On a turn, a player may remove from 1 to 7 sticks. The player who removes the last stick wins. Is there a strategy to win this game? If there is one what is it?

A possible extension: In a two player strategy game, the first player says 'January 1' and then players after that say on their turn, any date later in the year than the previous one by changing either the month or the day (but not both) forward. For example, the first player says January 1, the second January 5, the first can say April 5.... etc. The person wins when they say December 31. Is there a strategy that will guarantee a win? What is it?