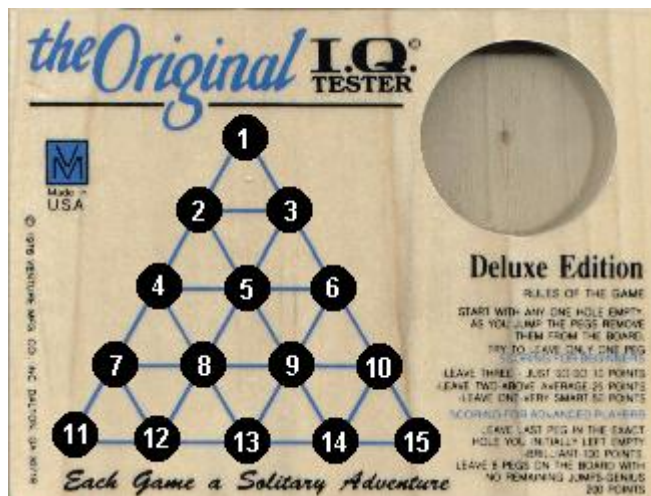Solving the I.Q. tester with SAT.

Consider the following game, taken from www.pegame.com.
In each of the 15 nodes there is a hole that can be covered with a 'peg'. Initially all but one of these nodes are covered. In each step the player can jump over a neighboring node into an empty node, while removing that neighbor from the board. There can be several goals:
1. Leave only one peg.
2. Leave last peg in the exact hole that was initially left empty.
3. Leave 8 pegs on the board with no remaining jumps.

Write a program that receives as input the size of the triangle (in this case 5), the location of the hole that is initially empty, and the goal (1,2 or 3 from the list above). The program then builds a CNF formula that each of its satisfying assignments correspond to a solution to the input problem. The program runs the SAT solver and presents the solution in a readable way.