

MA310
Homework #2
Due Tuesday, February 6

The solutions to the following problems should be typed, using proper English (and mathematics!), and clear enough for someone who is not in this class, and has not had the benefit of the classroom discussion, to follow.

1. Explain what the winning strategy is for game 33a in Section 2. What are the winning positions? Prove your assertion. Who can win and how? What if the game begins with a different set of two piles of stones? Prove your answers.
2. Explain what the winning strategy is for game 2 in Section 1. What are the winning positions? Prove your assertion. Who can win and how? What if the goal of the game is a different number? Prove your answers.
3. Use the definitions of winning and losing positions, working backward from the final winning position, to completely list the winning positions for game 4 in Section 1.
4. Use the definitions of winning and positions, working backward from the final winning position of \$1.00, to completely list the winning positions for game 5 in Section 1.