MA310 Homework #4

Due Friday, March 5.

1. Problem 24 "100". Include (1) an explanation and justification of how to play this game successfully, (2) an explanation and justification of how to play the game successfully if "100" and "6" are changed to other numbers, and (3) comments on how you discovered the solution in the first place.

2. Problem 25 "Penny Piles". Explain as much as you know about playing this game successfully. Include a description and justification of the "good" and "bad" positions that you know so far (maybe you know all of them!)

3. Problem 27 "Number Guessing Cards". Explain how the "magician" can quickly determine the selected number. Why does this distribution of the numbers on the cards work? Justify your answer.

4. Problem 28(1) "Weird Multiplication" (First Method). Explain why this method of multiplication works.