Name:	
Pid:	

Note that every statement in the homework should be proved. The only exeptions are statements that were proven in previous homework or midterms and statements proven earlier in the class.

1. Compute Grundy function for states of the subtraction game where players may subtract 1, 2 or 5 chips on their turn.

2. Compute Grundy function for the Nim position (1,3,5).

3. Consider the following game: Alice and Bob are writing from left to right digits of a 11-digit number one by one. Alice wins if the number divides by 7 and Bob wins otherwise (Alice writes the first the digit). Determine who is the winner.