Zackery Field
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CS 70, Summer 2013
Homework 2
Problem 8 [8 Points]

1. [8 Points] Application of a pseudo random number generator.

$$x_{t+1} = (a * x_t + b)(modm)$$

Assume that a, and b are constants. Then for $t \in \{0, 1\}$, create a system of linear congruent equations to solve for a, and b plugging in known values for both $x_{t+1} and\, x_t$. Then, repeast the process for $t \in \{2, 3\}$, creating another system of equations. Since m is prime it is known that there will be a solution for all possible t. Compare your values from the two sets of linear system solutions. If they agree, or come reasonably close to agreeing, then you can guess your opponents hand for $t \in \{4, 5, 6, 7, 8\}$.