Math 2001: Homework 5

Due: September 29, 2008

Give complete justifications for all your answers.

Problem 1

1. Let $b_1 = 1$, $b_2 = 0$, $b_3 = 0$. Compute the first 20 values of $b_n = b_{n-1} - 2b_{n-2} + b_{n-3}$.

2. Give a description of $\{1, 2, 3, \ldots\}$ as a recursive sequence.

3. Give a description of $\{1, 2, 4, 8, 16, \ldots\}$ as a recursive sequence.

4. Give a description of $\{1, 2, 6, 24, 120, \ldots\}$ as a recursive sequence.