Joon Yoo
Myungji Highschool
2009 May 12th
Due by May 13th

Homework 1

1. Email me about how you think of this class? I need feedback from you to improve this class.(Please email me by midnight, so I can check the feedback before the next class.)
2. Write the first five terms of the sequence given by $a_n = \frac{(-1)^n}{2n-1}$.
3. Find the first five terms of the sequence defined recursively by $a_1 = 1$ and $a_n = 3(a_{n-1} + 2)$
4. Find the first five terms and the 100th term of the sequence defined by
   a. $c_n = n^2 - 1$
   b. $t_n = \dfrac{n}{n+1}$
   c. $\{\sin \dfrac{n}{2}\pi\}$
5. Find the nth term(formula for the nth term) of a sequence whose first several terms are given.
   a. $\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{7}{8}, \dots$
   b. $1, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \frac{1}{32}, \dots$
   c. $0, 2, 0, 2, 0, 2, \dots$
   d. $1, \frac{1}{2}, 3, \frac{1}{4}, 5, \frac{1}{6}, \dots$
   e. $3, \frac{3}{2}, 1, \frac{3}{4}, \frac{3}{5}, \frac{1}{2}, \cdots$