172 Quiz 10 Name: _____

1. Let $a_n = \dfrac{n}{n+3}$
   List the first 5 terms, then compute $\lim\limits_{n\to\infty} a_n$

2. Find a formula a_n for the $n$the term of the sequence $\{1, -3, 5, -7, 9, -11, ...\}$

3. List the first 5 terms of the sequence where $a_1 = 2, a_{n+1} = \dfrac{a_n}{1+a_n}$

4. List the first 7 terms of the sequence defined by $a_1 = a_2 = 1, a_{n+1} = 2a_n + 3a_{n-1}$

5. For the sequence defined in question 4 above, write the first 6 terms of $\dfrac{a_{n+1}}{a_n}$