Sequences: Calculus II Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In your groups, find a formula for the nth term of the sequence (as given in number four) and then explore what happens to the following sequences of numbers as n goes to infinity. State why mathematically you think your answer is correct.

**DO NOT OPEN YOUR TEXT BOOK!!!!!**

1. {1, 2, 3, 4, 5, 6, … …}
2. 
3. 
4. 
5. 
6. 

Another way to write a sequence is in the following manner: ,. What do you think happens to the terms in the sequences as n approaches infinity? Why?

Which of the sequences converge and which diverge (why?)? Find the limit of each convergent sequence.

1. 
2. 
3.  (x>0)
4.  (|x|<1)
5. 
6. 