**Worksheet 1**

1. Write the following sequence as 
   1. 
   2. 
2. Find following limits
   1. 
   2. 
   3. 
   4. 
3. Give a function  and a sequence find 
   1. 

* 1. 

1. Let 
   1. Determine whether the sequence is bounded or not.
   2. Does it convergent or divergent, why? (don’t use the limit here)
   3. Find 
2. Check monotonicity of 
3. Find limit of recursive sequence: , 

Hint: 

1. 