ECE 312 HW#6

1. (10 points) Prove and specify the ROC.
2. Find the *X*(*z*) and ROC for each of the following functions:
3. (5 points)
4. (5 points)
5. (5 points)
6. (10 points) Suppose a finite sequence is , where the red number is the value of *x*[0]. Find *X*(*z*) and the ROC.
7. (BONUS PROBLEM, 20 points) A signal is sampled at a 1 KHz rate. Take 512 samples of this function (beginning at *t*=0) and plot *X*(θ).