ECE 341 - Homework #3

Dice Games and z-Transform. Due Friday, May 21st

Please make the subject "ECE 341 HW#3" if submitting homework electronically to Jacob_Glower@yahoo.com (or on blackboard)

Farkle

1) Compute the odds of rolling a straight when rolling six dice

   dice = 1, 2, 3, 4, 5, 6

2) Compute the odds of rolling three pair (x and y are different. z can be any value including x or y)

   dice = xx yy zz or xx xx yy

z-Transforms

3) Find the inverse z-transform

$$X = \left(\frac{0.01z^2}{(z-1)(z-0.9)(z-0.8)} \right)$$

4) Find the inverse z-transform

$$X = \left(\frac{0.02(z+1)^3}{(z-1)(z-0.9)(z-0.8)} \right)$$

5) A new Nissan Leaf costs $31,760. Assume you take out a 36-month loan at 2.59% interest. What will be the monthly payments? Solve using z-transforms.