ECE 341 - Homework #9

Weibull Distribution, Central Limit Theorem. Due Wednesday, June 2nd

Please make the subject "ECE 341 HW#9" if submitting homework electronically to Jacob_Glower@yahoo.com (or on blackboard)

Weibull Distribution

1) Determine and plot the cdf for the voltage, V4, in homework set #7 using a Weibull approximation.

2) Determine and plot the pdf for the voltage, V4, in homework set #7 using a Weibull approximation.

- hint: use the result from problem #1

Central Limit Theorem

Let X be the sum of ten 6-sided dice (10d6 - i.e. level 10 fireball for d&d fans...).

3) Determine the probability of rolling 45 or higher with 10d6

4) Use a Normal approximation and from this, determine the probability that the sum is 44.5 or higher.

Let {a, b, c, d, e, f} be uniform distributions over the range of (0, 1).

Let X be the sum: a + b + c + d + e + f

5) Determine the probability that the sum is more than 4.2

6) Use a Normal approximation and from this, determine the probability that the sum is more than 4.2