ECE 476/676 - Homework #6

Math, Random, and Matrix Routines - Due Monday, March 3rd

Reflex Game

Write a Python program to measure your reflex time.

- Each round starts with pressing and releasing button GP15
- When pressed, a random time, N, is generated
 - N has a Gamma distrubution with p = 1/2 and r = 3
 - (sum of three exponential distibutions, each with a mean of 2 seconds)
- The Pico board then waits N seconds and then turns on the beeper
- Once the beeper turns on, you are to press GP15 again
- The time between the beeper turning on and your pressing GP15 is your reflex time.



- 1) Write a Python program to play this game one time
- 2) Add graphics at the end to display your reflex time after each round (from 1 to 8)



3) After round 2 and thereafter, add a routine to compute a least-squares curve fit for your reflex time after each round

```
reflex time = a * round + b
```

4) Display this curve fit after each round on the LCD display



5)Demo