Comp. Anal. of Phys. Sys.

HW3

1)

Do the Monte Carlo pi calculation which we studied in class for

$$N=10^k \text{ where } k=1,2,3,4,5,6$$

and

a) Plot the (k vs. pi) graph.

b) Plot the (k vs. time) graph.

2)

Angelina and Brad are playing a game using a dice of six sides with the numbers **{-4,-3,-1,1,2,4}** written on the sides. Each roll the dice three times and add the results. The aim is to get **zero** and who gets the zero **first** wins the game. Angelina starts the game.

For example,

Angelina:-4+1+4=1, Brad:-1+2+4=5, Angelina:-3-4-1=-8,

Brad:-3+1+1=1, Angelina:-4+2+2=0 and Angelina wins.

Simulate this game **until** Angelina or Brad wins. Print the **name** of the winner on the screen.