Homework 7

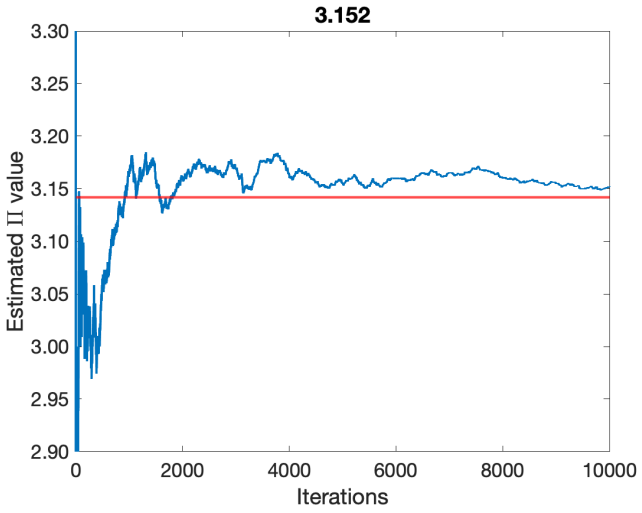
Monte Carlo method

Write matlab script to estimate the value of π using Monte Carlo method (random numbers). Calculate relative error (%) for 10^2, 10^4, 10^6 iterations.

Draw the graph number of iterations versus estimated π-value (see example below). The red line represents the solution or the true value of π.

MATLAB code for plotting red line at π is:

```
> yline(pi,'color','r','LineWidth',2)
```



If you run your script several times, is the relative error always the same? Read the Matlab documentation and familiarize yourself with the `rng("default")` command and the *seed*.