No.11. Monte Carlo Simulation

ID _____ Name_____

（1）Make a Ruby function average(t, n) that computes the average when performing the function montecalro(n) t times. Observe the performance of the Monte-Carlo Method taking a large t. Write anything you observed below.

```
def montecarlo(n)
    m = 0
    for i in 1..n
        x = rand() # random number in [0,1)
        y = rand()
        if x*x + y*y < 1.0 # (*)
            m = m + 1
        end
    end
    4*m*1.0/n
end
def average(t, n)
# repeat t times montecarlo(n)
# write here




end
```

n	t	Average	# correct digits
1			
10			
100			
1000			
10000			

2) (optional) Make a program that computes the volume of the 3-dimentional unit sphere, and do the same thing as in Question 1.