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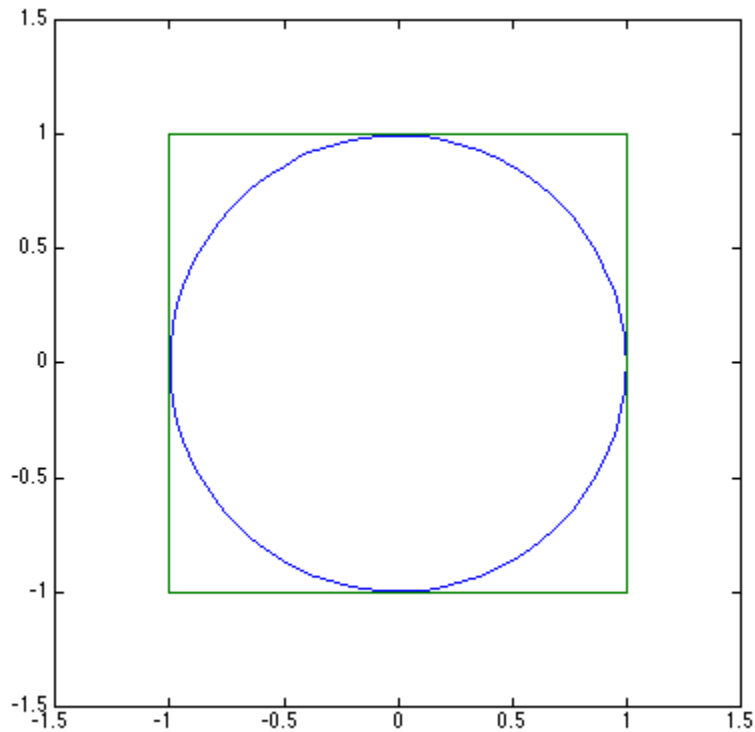
# MIT005R.m

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## Piirret"a"an tikkataulu ja ymp"ar"oiv"a neli"o.

```
t = linspace(0,2*pi);  
x = cos(t);y = sin(t);  
plot(x,y,[1 1 -1 -1 1 ], [-1 1 1 -1 -1]);  
axis([-1.5 1.5 -1.5 1.5])  
axis square
```



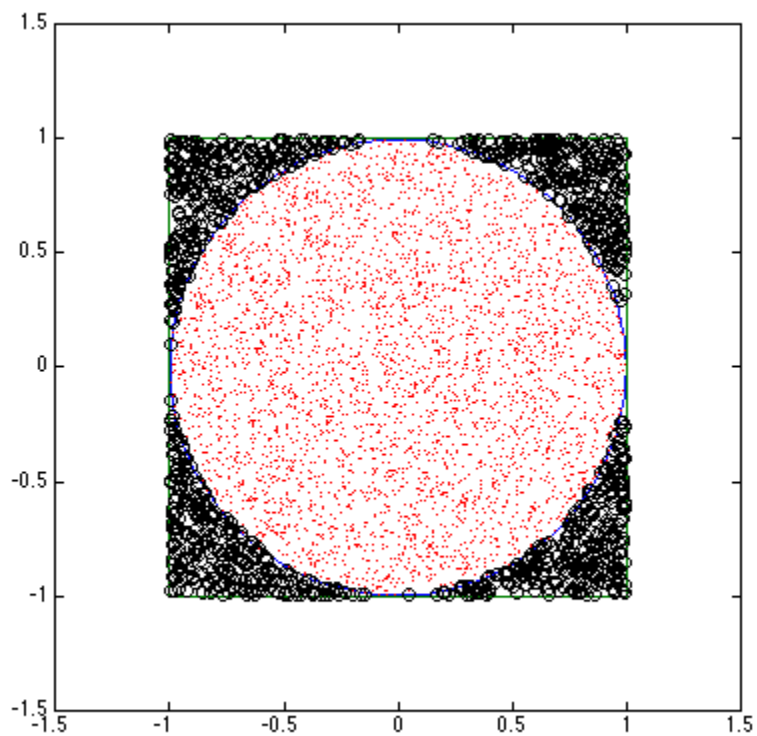
## Arvonta

```
n = 5000; % tikkojen lkm, muuttele.  
X = 2*rand(n,1)-1; % Satunnais-x-koordinatit v"al. (-1,1)
```

```
Y = 2*rand(n,1)-1; % Vastaavasti y-koord.  
  
hit = ((X.^2+Y.^2)<=1);  
hold on  
plot(X(hit),Y(hit),'r.',X(~hit),Y(~hit),'ko')  
N=sum(hit) % hit on looginen vektori summa = ykk"osten lkm.  
%N = nnz(hit); % My"os valmis funktio "number of nonzeros"
```

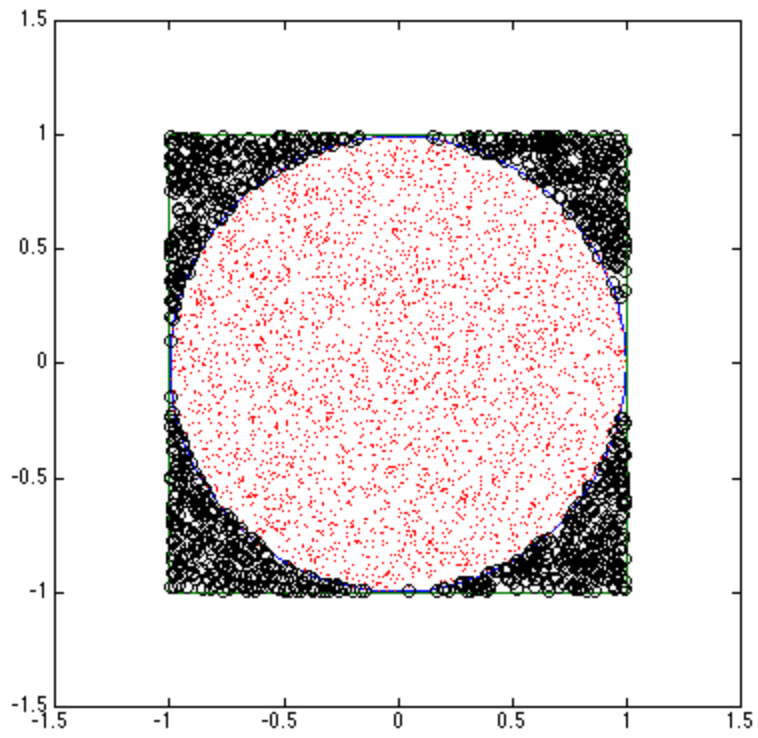
$N =$

3905



```
disp(['osuneet/n ' ' pi/4'])  
disp([N/n, pi/4])  
hold off
```

```
osuneet/n    pi/4  
0.7810      0.7854
```



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