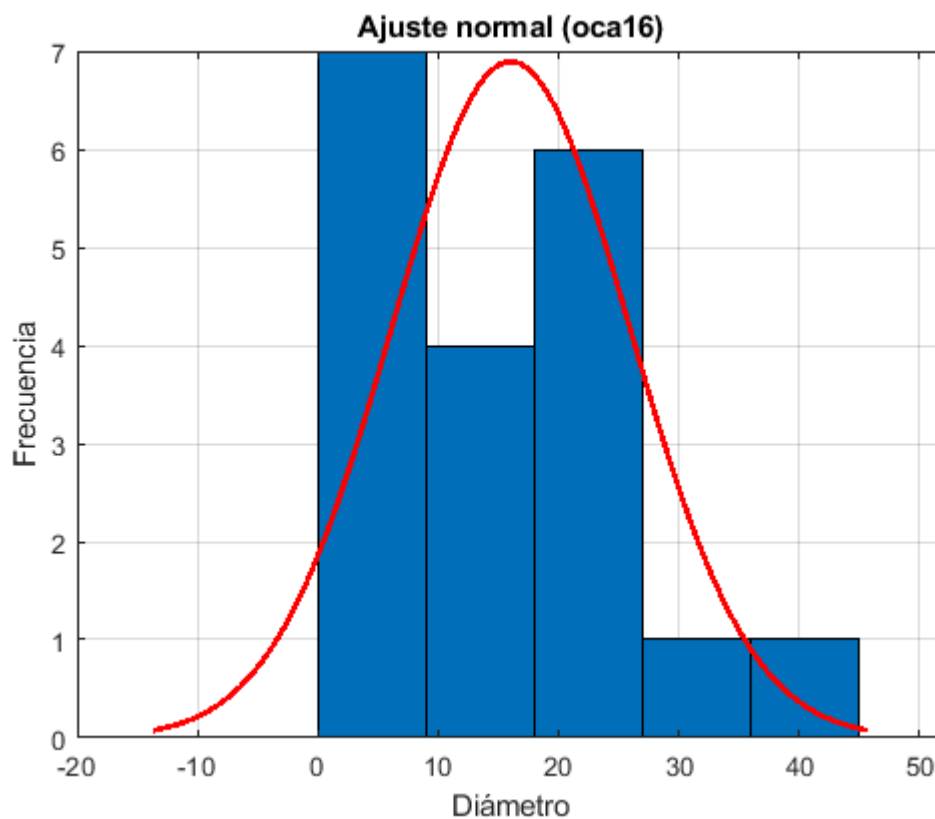


```
clear all; close all; clc
oca16 = table2array(importfile('oca16data.txt'));
oca18 = table2array(importfile('oca18data.txt'));
oca19 = table2array(importfile('oca19data.txt'));
oca20 = table2array(importfile('oca20data.txt'));
```

```
doca16 = diameter(oca16);
doca18 = diameter(oca18);
doca19 = diameter(oca19);
doca20 = diameter(oca20);
```

```
h = histfit(doca16,[],'normal');
xlabel('Diámetro'); ylabel('Frecuencia'); title('Ajuste normal (oca16)'); grid on;
```

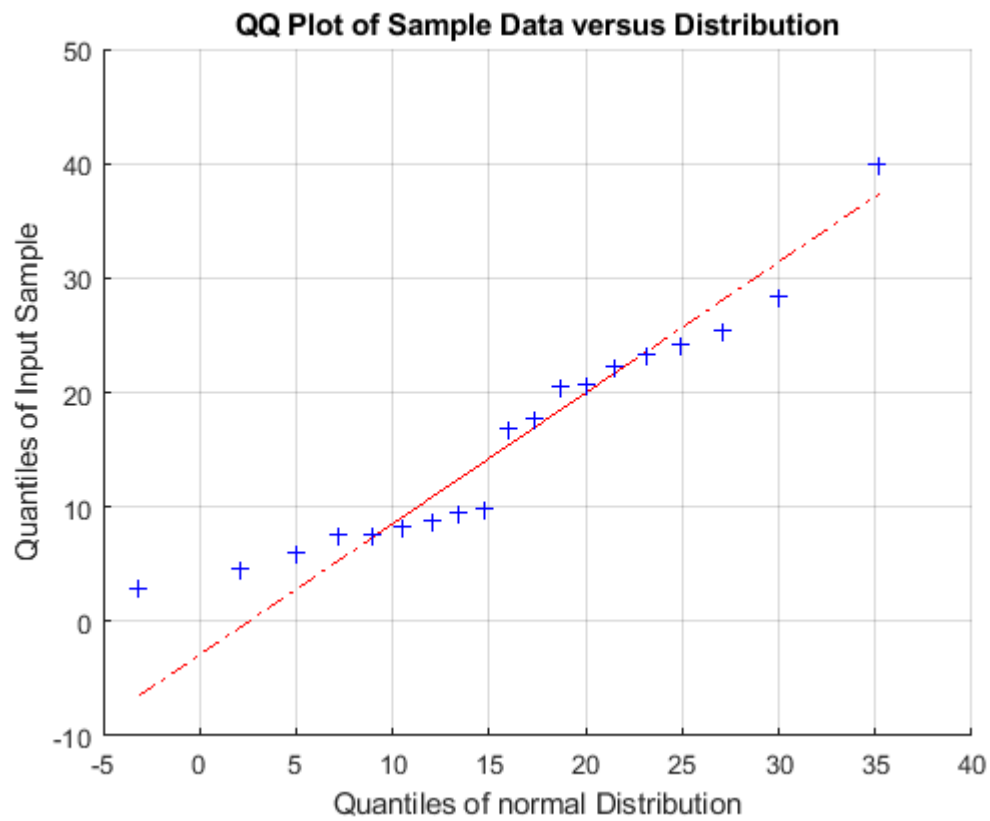


```
pd = fitdist(doca16,'Normal')
```

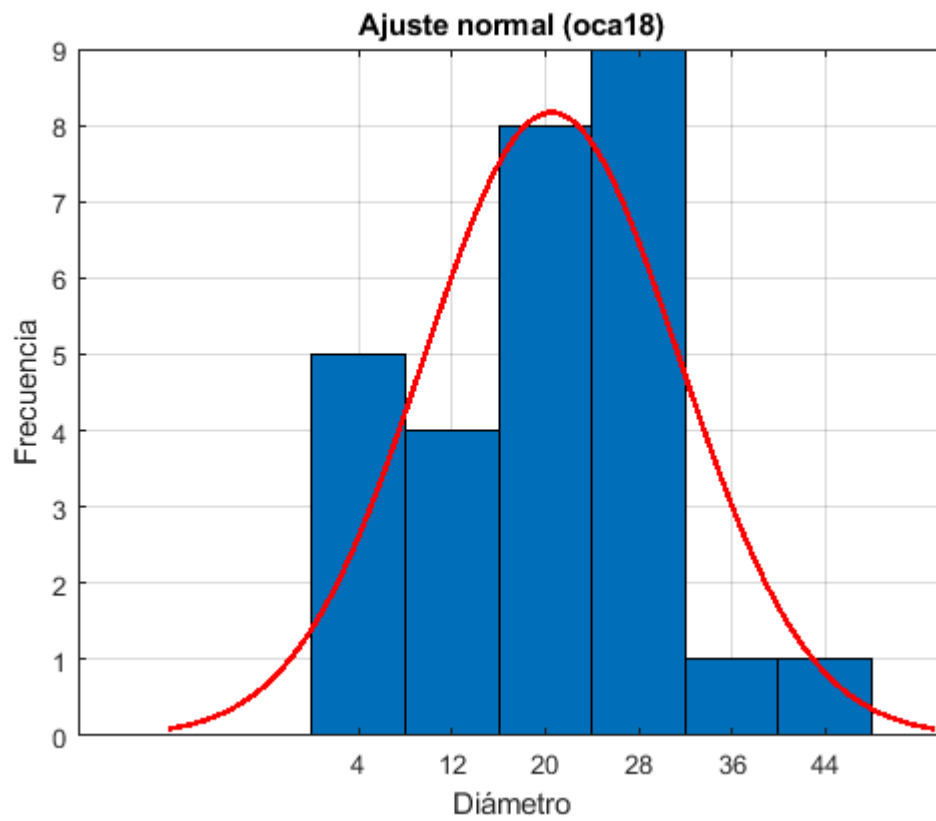
```
pd =
    NormalDistribution

    Normal distribution
        mu = 16.0355    [11.2662, 20.8049]
        sigma = 9.89521 [7.47695, 14.6333]
```

```
qqplot(doca16,pd); grid on;
```



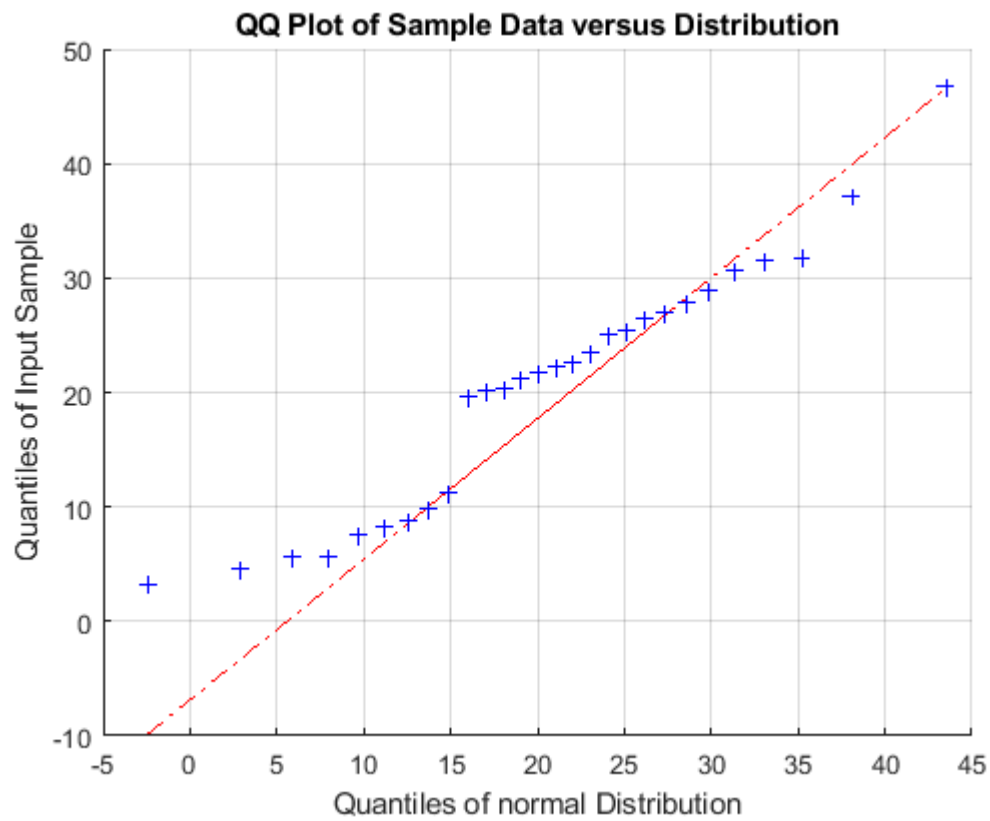
```
h = histfit(doca18,[],'normal');  
xlabel('Diámetro'); ylabel('Frecuencia'); title('Ajuste normal (oca18)'); grid on;
```



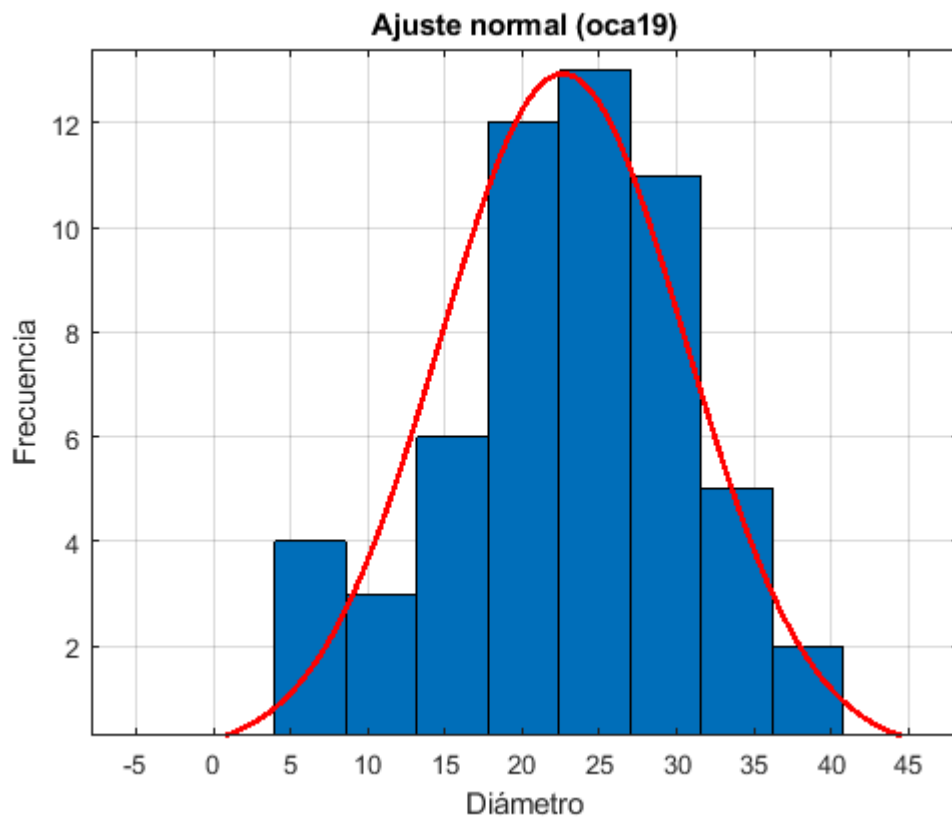
```
pd = fitdist(doca18,'Normal')
```

```
pd =  
NormalDistribution  
  
Normal distribution  
mu = 20.5495 [16.3081, 24.7908]  
sigma = 10.9382 [8.64796, 14.8884]
```

```
qqplot(doca18,pd); grid on;
```



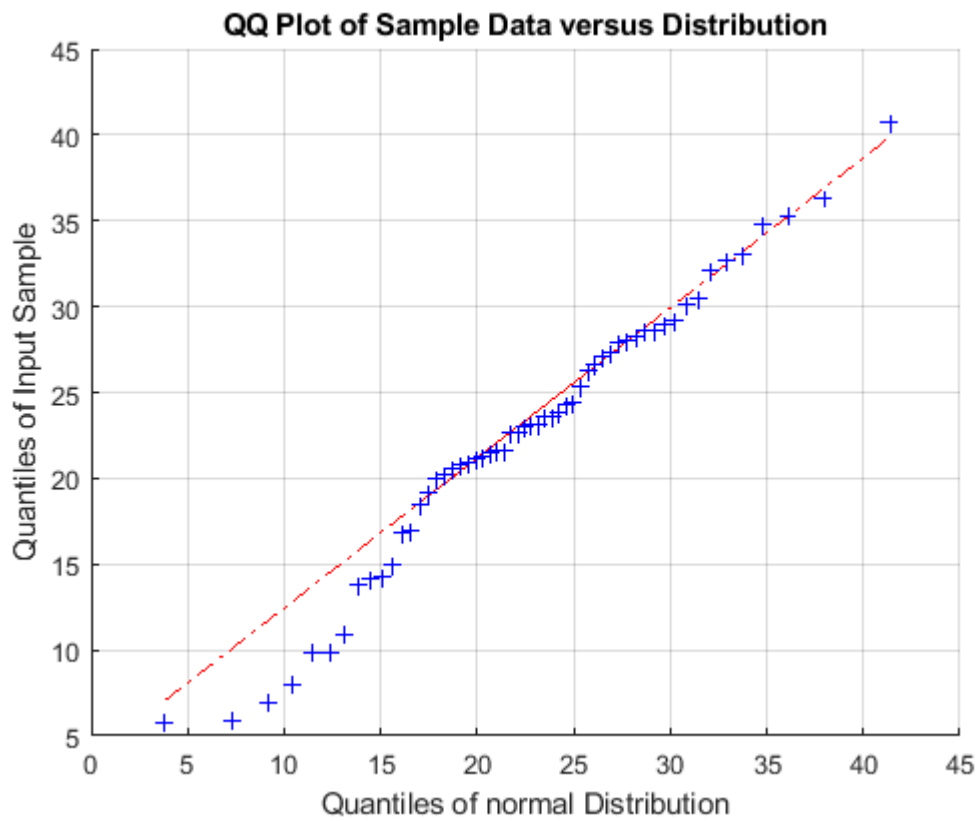
```
h = histfit(doca19,[],'normal');  
xlabel('Diámetro'); ylabel('Frecuencia'); title('Ajuste normal (oca19)'); grid on;
```



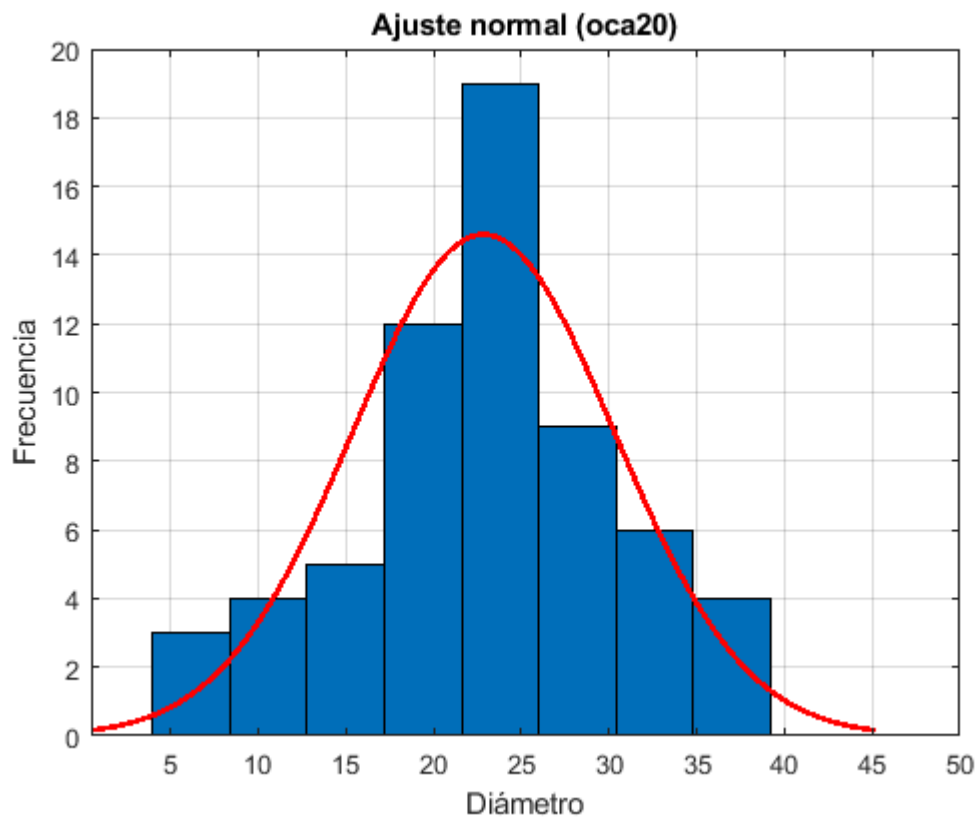
```
pd = fitdist(doca19,'Normal')
```

```
pd =  
NormalDistribution  
  
Normal distribution  
mu = 22.632 [20.5055, 24.7585]  
sigma = 7.94058 [6.6945, 9.761]
```

```
qqplot(doca19,pd); grid on;
```



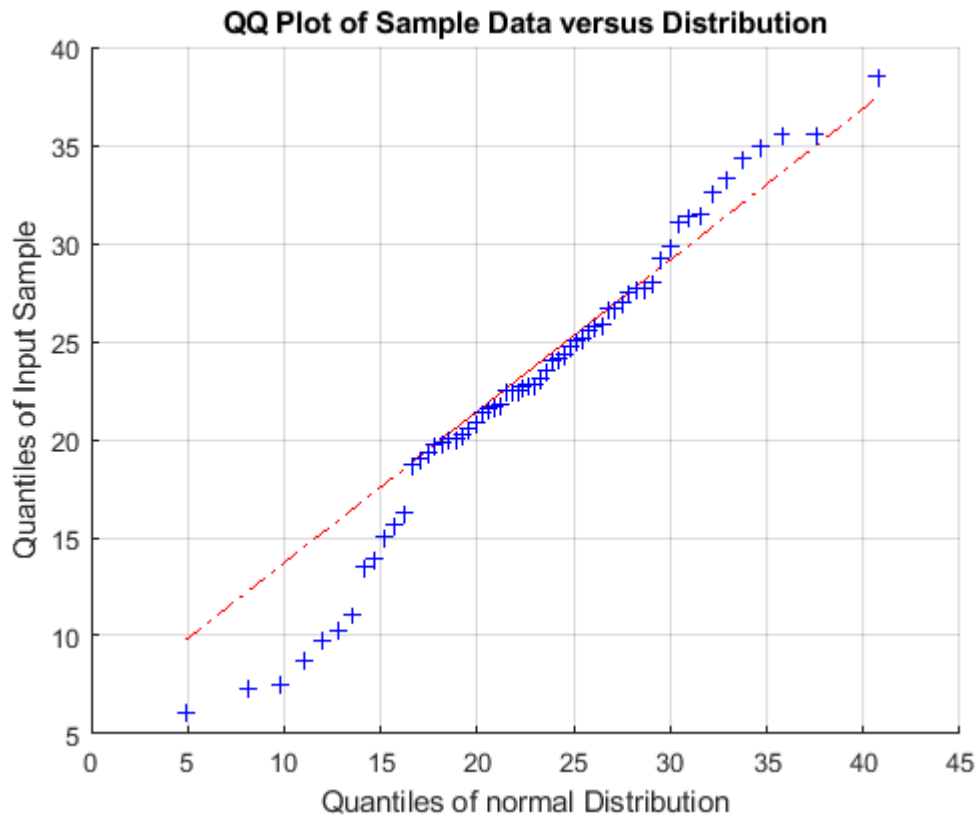
```
h = histfit(doca20,[],'normal');  
xlabel('Diámetro'); ylabel('Frecuencia');  
title('Ajuste normal (oca20)'); grid on;
```



```
pd = fitdist(doca20,'Normal')
```

```
pd =  
NormalDistribution  
  
Normal distribution  
mu = 22.8456 [20.9526, 24.7387]  
sigma = 7.4544 [6.33446, 9.05912]
```

```
qqplot(doca20,pd); grid on;
```



```
[EDtable19] = EstDescrip(doca19)
```

```
EDtable19 = 1x6 table
```

	Valor mínimo	Valor máximo	Mediana	Error óptimo	Suma de datos	Cantidad
1	5.7852	40.7927	23.0528	1.0611	1.2674e+03	56

```
[EDtable16] = EstDescrip(doca16)
```

```
EDtable16 = 1x6 table
```

	Valor mínimo	Valor máximo	Mediana	Error óptimo	Suma de datos	Cantidad
1	2.9219	40.0165	16.8415	2.2701	304.6751	19

```
[EDtable18] = EstDescrip(doca18)
```

```
EDtable18 = 1x6 table
```

	Valor mínimo	Valor máximo	Mediana	Error óptimo	Suma de datos	Cantidad
1	3.1755	46.7704	22.0361	2.0671	575.3846	28

```
[EDtable20] = EstDescrip(doca20)
```

```
EDtable20 = 1x6 table
```

	Valor mínimo	Valor máximo	Mediana	Error óptimo	Suma de datos	Cantidad
1	6.0743	38.5405	22.8031	0.9467	1.4164e+03	62


```

function [data] = importfile(filename, startRow, endRow,varargin)
    if nargin<=2
        startRow = 2;
        endRow = inf;
    end
    formatSpec = '%*8s%10f%[\n\r]';
    fileID = fopen(filename,'r');
    dataArray = textscan(fileID, formatSpec, endRow(1)-startRow(1)+1,...
        'Delimiter', '', 'WhiteSpace', '', 'TextType', 'string', 'EmptyValue', ...
        NaN, 'HeaderLines', startRow(1)-1, 'ReturnOnError', false, 'EndOfLine', '\r\n');
    for block=2:length(startRow)
        frewind(fileID);
        dataArrayBlock = textscan(fileID, formatSpec, endRow(block)-startRow(block)+1,...
            'Delimiter', '', 'WhiteSpace', '', 'TextType', 'string', 'EmptyValue', NaN, ...
            'HeaderLines', startRow(block)-1, 'ReturnOnError', false, 'EndOfLine', '\r\n');
        dataArray{1} = [dataArray{1};dataArrayBlock{1}];
    end
    fclose(fileID);
    data = table(dataArray{1:end-1}, 'VariableNames', {'esArea'});
end
function [d] = diameter(data)
    d = sqrt(4*data/pi);
end
function [EDtable] = EstDescrip(data)
    mindata = min(data);
    maxdata = max(data);
    meddata = median(data);
    errdata = std(data)/sqrt(length(data));
    sumdata = sum(data);
    ndata = length(data);
    EDtable = table(mindata,maxdata,meddata,errdata,sumdata,ndata,...
        'VariableNames', {'Valor mínimo','Valor máximo','Mediana',...
        'Error óptimo','Suma de datos','Cantidad'});
end

```