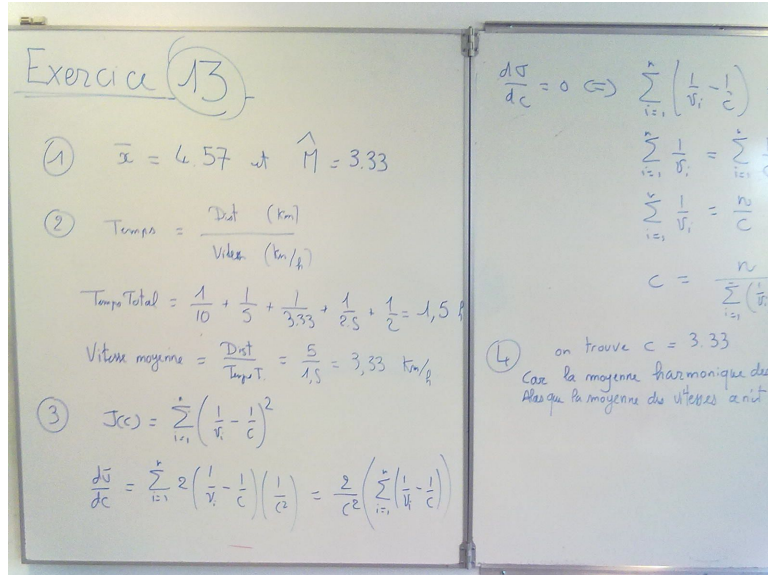


1 Exercice 13



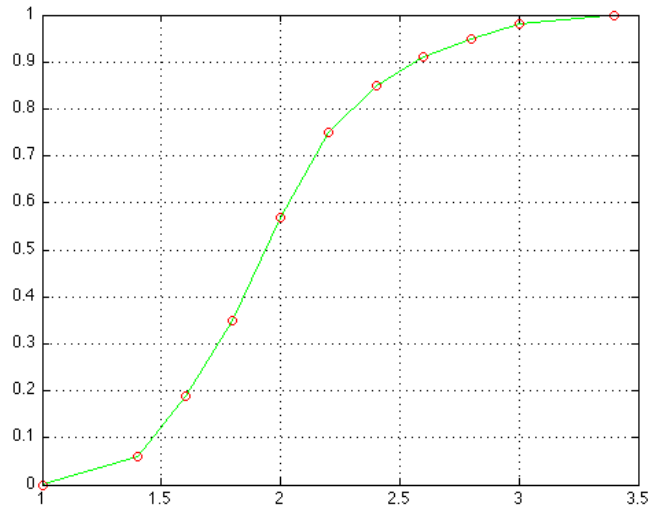
2 Exercice 4

$xc = [1. 1.4 1.6 1.8 2. 2.2 2.4 2.6 2.8 3. 3.4];$
 $C = [6 13 16 22 18 10 6 4 3 2];$

$f = C/\text{sum}(C);$ % frquences
 $F = \text{cumsum}(C)/\text{sum}(C);$ % frquences cumules
 $Fc = [0 F];$

$\text{plot}(xc,Fc,'g',xc,Fc,'or');$
 $\text{grid on};$
 $[xc' Fc']$
 $\text{ans} =$

1.0000	0
1.4000	0.0600
1.6000	0.1900
1.8000	0.3500
2.0000	0.5700
2.2000	0.7500
2.4000	0.8500
2.6000	0.9100
2.8000	0.9500
3.0000	0.9800
3.4000	1.0000

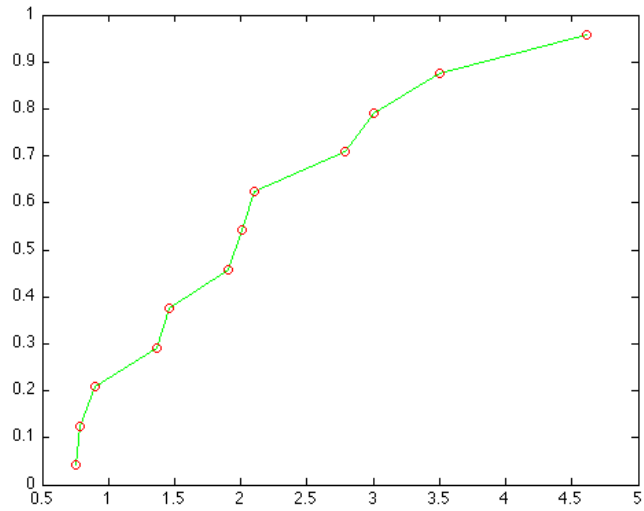


```
Tw = [3.50 0.78 0.75 2.01 4.61 1.90 1.37 0.90 2.1 3.00 1.46 2.79]
Sc = [1.40 0.79 0.36 1.27 2.16 0.55 0.85 0.65 1.08 3.10 0.64 1.30]
```

```
x = sort(Tw);
n = length(x); % taille de l'échantillon
f = ones(1,n)/n;
F = (1:n)/n; % frquences cumules
Fc = F - 1/2*(F - [0 F(1:n-1)]); % fonct. de rpartition empirique
```

```
[x' f' F' Fc']
h = plot(x,Fc,'g',x,Fc,'or');
```

```
ans =
    0.7500    0.0833    0.0833    0.0417
    0.7800    0.0833    0.1667    0.1250
    0.9000    0.0833    0.2500    0.2083
    1.3700    0.0833    0.3333    0.2917
    1.4600    0.0833    0.4167    0.3750
    1.9000    0.0833    0.5000    0.4583
    2.0100    0.0833    0.5833    0.5417
    2.1000    0.0833    0.6667    0.6250
    2.7900    0.0833    0.7500    0.7083
    3.0000    0.0833    0.8333    0.7917
    3.5000    0.0833    0.9167    0.8750
    4.6100    0.0833    1.0000    0.9583
```



```

X = [
1
3
4
0
7
2
0
4
2
4
3
2
3
5
99
4
0
3
7];

Xs = sort(X);

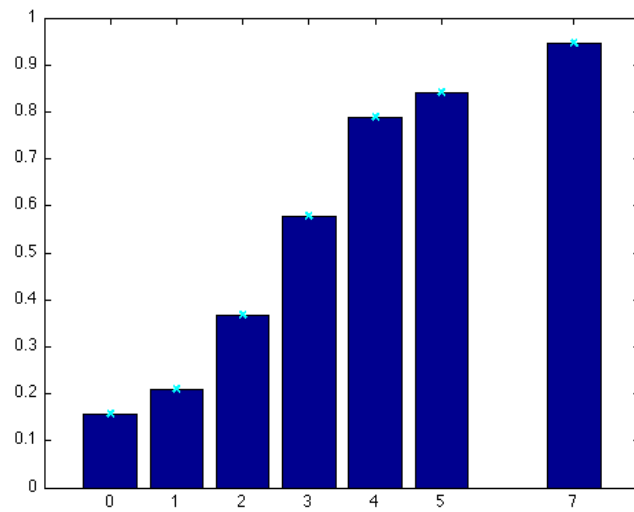
nb_pers = [0 1 2 3 4 5 7 99];
n = [3 1 3 4 4 1 2 1];
f = n/sum(n);
F = cumsum(f);

```

```

bar(nb_pers,F);
hold on;
h = plot(nb_pers,F,'xc');
set(h,'LineWidth',2);
axis([-1 8 0 1]);

```



3 Exercice 9

```

%1
-6/sqrt(30)
-2/sqrt(30)

cdf('norm',-2/sqrt(30),0,1)
cdf('norm',-6/sqrt(30),0,1)
cdf('norm',-2/sqrt(30),0,1) - cdf('norm',-6/sqrt(30),0,1)

%2
-8/sqrt(30)
cdf('norm',-8/sqrt(30),0,1)

%3
-2/sqrt(600)
2*cdf('norm',-2/sqrt(600),0,1)

ans =

```

-1.0954

ans =

-0.3651

ans =

0.3575

ans =

0.1367

ans =

0.2208

ans =

-1.4606

ans =

0.0721

ans =

-0.0816

ans =

0.9349