

```
clear
close all
figure(6,6)
```

Notenbeispiel

```
Noten = readtable('Noten.xlsx','Sheet','Noten Mathematik Englisch');
x = Noten.Mathematik;
y = Noten.Englisch;
```

Parameter der Randverteilungen:

```
xq = mean(x), yq = mean(y) % Mittelwerte
```

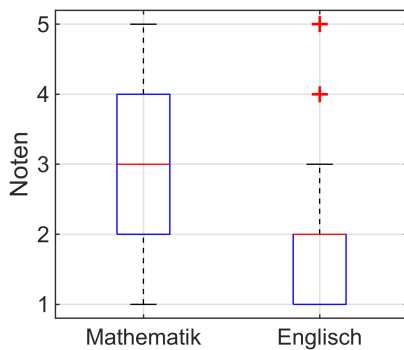
```
xq = 3.0333
yq = 1.9000
```

```
sx2 = var(x), sy2 = var(y) % Varianzen
```

```
sx2 = 1.2057
sy2 = 0.9897
```

Boxplot der Randverteilungen

```
boxplot([x,y],{'Mathematik','Englisch'})
grid on, ylabel('Noten')
```



Kovarianzmatrix

```
COV = cov(x,y)
```

```
COV = 2x2
    1.2057    0.0379
    0.0379    0.9897
```

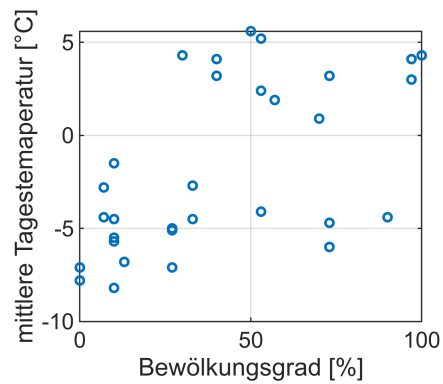
Bewölkung / Temperatur Jänner 2002

```
Wetter_2002 = readtable('wetter.xlsx','Sheet','Wetter 2002');
x = Wetter_2002.Bedeckung;
```

```
y = Wetter_2002.Temperatur;
```

Streudiagramm / Scatterplot

```
plot(x,y,'o')  
grid on, xlabel('Bewölkungsgrad [%]'), ylabel('mittlere Tagesstemperatur [°C]')
```



Pearson-Korrelationskoeffizient

```
sx = std(x), sy = std(y) % Standardabweichungen
```

```
sx = 31.0579  
sy = 4.5788
```

```
COV = cov(x,y); sxy = COV(2,1) % Kovarianz
```

```
sxy = 80.8498
```

```
R_Pearson = sxy/(sx*sy)
```

```
R_Pearson = 0.5685
```

oder mit corr

```
R_Pearson = corr(x,y)
```

```
R_Pearson = 0.5685
```

Spearman-Rangkorrelationskoeffizient

```
R_Spearman = corr(x,y,'type','Spearman')
```

```
R_Spearman = 0.5702
```