Tutorial / Lösungshinweise (RStudio)

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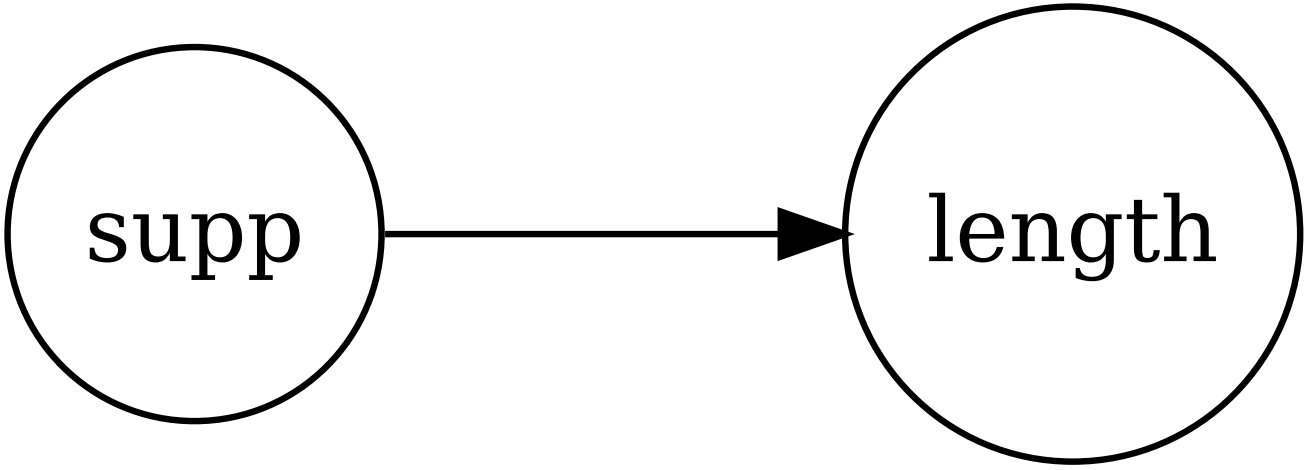
Aufgabe: T-TEST

Analysemodell



Univariate Analyse

```
summary(ToothGrowth)
```

```
##       len        supp         dose
##  Min.   : 4.20   OJ:30   Min.   :0.500
##  1st Qu.:13.07   VC:30   1st Qu.:0.500
##  Median :19.25           Median :1.000
##  Mean   :18.81           Mean   :1.167
##  3rd Qu.:25.27           3rd Qu.:2.000
##  Max.   :33.90           Max.   :2.000
```

```
vc  <-  subset(ToothGrowth,  supp=="VC")
summary(vc[c(1,3)])
```

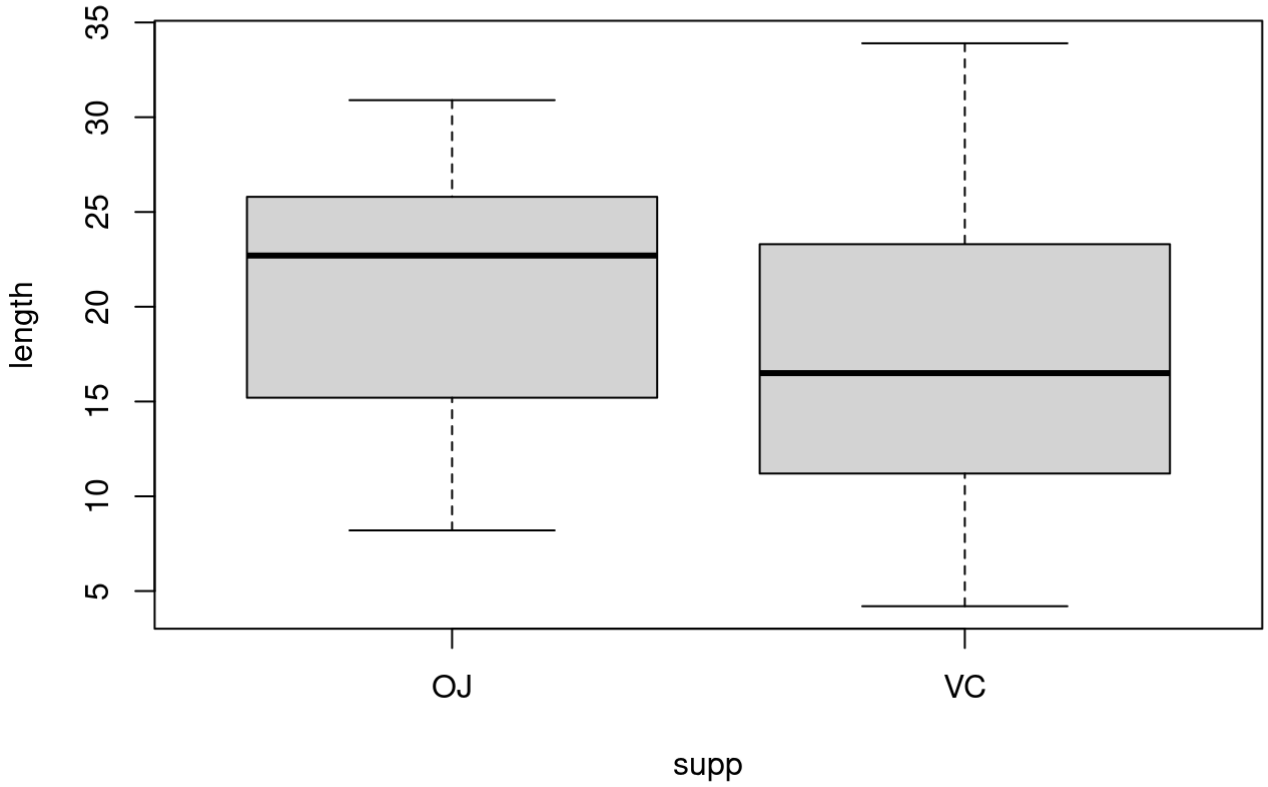
```
##       len             dose
##  Min.   : 4.20   Min.   :0.500
##  1st Qu.:11.20   1st Qu.:0.500
##  Median :16.50   Median :1.000
##  Mean   :16.96   Mean   :1.167
##  3rd Qu.:23.10   3rd Qu.:2.000
##  Max.   :33.90   Max.   :2.000
```

```
oj  <-  subset(ToothGrowth,  supp=="OJ")
summary(oj[c(1,3)])
```

```
##       len             dose
##  Min.   : 8.20   Min.   :0.500
##  1st Qu.:15.53   1st Qu.:0.500
##  Median :22.70   Median :1.000
##  Mean   :20.66   Mean   :1.167
##  3rd Qu.:25.73   3rd Qu.:2.000
##  Max.   :30.90   Max.   :2.000
```

Bivariate Analyse

```
boxplot(ToothGrowth$len ~ ToothGrowth$supp,  xlab  =  "supp",  ylab  =
"length")
```




```
t.test(ToothGrowth$len ~ ToothGrowth$supp)
```

```
##
##  Welch Two Sample t-test
##
## data:  ToothGrowth$len by ToothGrowth$supp
## t = 1.9153, df = 55.309, p-value = 0.06063
## alternative hypothesis: true difference in means between group OJ and group VC is not equal to 0
## 95 percent confidence interval:
##  -0.1710156  7.5710156
## sample estimates:
## mean in group OJ mean in group VC
##         20.66333         16.96333
```