

EXAMEN TOEPASSINGEN VAN STATISTIEK 2017

Question 1:

SAS output invullen

- DF, MSR, MSE, F, p-value, Type I, Type III, intercept, coefficients
- Compare means with Tukey method, give difference, confidence interval, significance
- Rare grafiek, Type I en Type II zone aanduiden...
- Multiple choice (True/False): given the output, it is possible to assess following hypothesis
 - H_0 : Mean a = Mean C (True) and not H_0
 - H_0 : mean A = Mean D (false) and not H_0
 - H_0 : B = Mean D (false) And not H_0
 - H_0 : all means are equal vs not all means are equal (true)

Question 2:

- Give the name of the model that is assessed here : logistic model
- Compute the probabilities
- Sas statements
- Survival analysis. Given 3 observations, at $t = 20$, first one is censored, $t=35$ observation dies, $T=45$ other observation dies.

Question 3: Binary Logit Food vs. Non Food

- Sas output invullen FP/TP/Sensitivity/Correct events/incorrect events, enz. Voor $p = 0$, $P = 0,5$, $P=1$.
- Multiple choice question True/False
 - 1 and 13 are a discordant pair False: false
 - 1 and 26 are a concordant pair True:true

Question 4

- Compute the total number of accidents given alcohollock + 200 accidents previously
- Plot regression in a graph
- Multiple Choice questions True/False
 - Alcohollock does not help that much to decrease the total number of accidents (True since the P-value $> 0,05$) \rightarrow false, P-value is about difference
 - The best way to decrease the number of accidents is ... ?
 - A model with random effects would be better (true? false?)

Question 5

Question 6

- You want to find out whether a student will study HIR or burgerlijk ingenieur based on IQ and other test. Which model would you use?
 - Anova
 - **Discriminant Analysis**
 - Factor
 - Cluster
- Give the Sas statements

Question 7:

- **A: Exponential B: Weibull with $\gamma > 1$**
- A: Exponential B: exponential
- **A: Exponential B: Weibull $\gamma < 1$**
- A: Weibull, B Weibull $\gamma < 1$

Question 8: Given a table with clusters, draw the dendrogram. How many clusters would you make based on the provided data (3 clusters).