STATISTICS 2
WS 2023/24 (Mag. Thomas Forstner)

Course-Number: 366.554

8) The value of haemoglobin of total 26 patients with sickle cell anaemia is measured. 16 persons (group A) suffer from a severe form and 10 persons (group B) suffer from a moderate form. We want to verify, if there is a statistically significant difference in the true mean haemoglobin value between the two groups (type I error = 5%, normality can be assumed).

haemoglobin [g/100ml]																
Group A	7,2	7,7	8,0	8,1	8,3	8,4	8,4	8,5	8,6	8,7	9,1	9,1	9,1	9,8	10,1	10,3
Group B	8,1	9,2	10,0	10,4	10,6	10,9	11,1	11,9	12,0	12,1						

a) Use the F-test for verifying, if there is a difference between the "true variances".
b) Use the Levene-test for verifying, if there is a difference between the "true variances".
c) Construct a test for verifying, if there is a difference between the "true means".
d) Construct a 95% confidence interval for the difference between the "true means".

9) Someone is interested, whether there is a statistically significant difference between the average time to deliver a pizza to his home from Pizza Company A and Pizza Company B. Based on the collected data from a sample of deliveries of Company A and Company B the following point estimators were calculated:

	Pizza Company A	Pizza Company B
mean delivery time [min]	22,13	18,68
standard deviation [min]	3,74	1,21
number of deliveries	8	6

Construct an appropriate test for verifying, if there is a difference between the "true mean delivery times" (type I error = 5%, normality can be assumed).