HT 2020 Inlämningsuppgift 2, Statistikens grunder, dagtid
Övningslärare: Anna Stenkvist/Maria Anna Di Lucca
Övningsgrupp: SCG6
Data utan SAS: Colombia
Data med SAS: Hepatitis
Inlämningsdatum: 23/10 kl. 17.00

Gruppmedlemmar:

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Övningslärarens anteckningar:
Resultat efter första rättningen:

	Godkänt		Kompletterin g	Lärarens signatur: …… ……..

OBS! Vid eventuell komplettering skall ursprungsuppgiften med försättsblad bifogas
Kommentarer (vid komplettering):

Deluppgift 1utan SAS: Data Colombia

priset	2014	2015	2016	2017
bönor(råda)	3909	3819	4048	4065
bonör	3012	3246	3158	3115
bönor(vita)	3434	3372	3332	3296

kvantitet	2014	2015	2016	2017
bönor(råda)	7	6	7	6
bonör	6	6	6	6
bönor(vita)	6	6	6	6

	Bas år 2014		Rapporteringsår 2015	
Produkt	priset p0	kvantitet q0	priset p1	kvantitet q1
bönor(råda)	3909	7	3819	6
bonör	3012	6	3246	6
bönor(vita)	3434	6	3372	6

	p0*q0	p1*q0		p1*q1	p0*q1
	27363	26733		22914	23454
	18072	19476		19476	18072
	20604	20232		20232	20604
Summa	66039	66441		62622	62130
Laspeyres %	100,61		Paasches %	100,79	

Från 2014 till 2015 har priset på bönor ökat med 0,61% respektive 0,79%

	Bas år 2014		Rapporteringsår 2016	
Produkt	priset p0	kvantitet q0	priset p1	kvantitet q1
bönor(råda)	3909	7	4048	7
bonör	3012	6	3158	6
bönor(vita)	3434	6	3332	6

	p0*q0	p1*q0		p1*q1	p0*q1
	27363	28336		28336	27363
	18072	18948		18948	18072
	20604	19992		19992	20604
Summa	66039	67276		67276	66039
Laspeyres %	101,87		Paasches %	101,87	

Från 2014 till 2016 har priset på bönor ökat med 1,87%

	Bas år 2014		Rapporteringsår 2017	
Produkt	priset p0	kvantitet q0	priset p1	kvantitet q1
bönor(råda)	3909	7	4065	6
bonör	3012	6	3115	6
bönor(vita)	3434	6	3296	6

	p0*q0	p1*q0		p1*q1	p0*q1
	27363	28455		24390	23454
	18072	18690		18690	18072
	20604	19776		19776	20604
Summa	66039	66921		62856	62130
Laspeyres %	101,34		Paasches %	101,17	

Från 2014 till 2017 har priset på bönor ökat med 1,34% respektive 1,17%.

Deluppgift 2 med SAS: data Hepatitis

Data Set Name	WORK.HEPATITIS	**Observations**	106
Member Type	DATA	**Variables**	4
Engine	V9	**Indexes**	0
Created	2020-10-20 16:13:37	**Observation Length**	32
Last Modified	2020-10-20 16:13:37	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	2038
Obs in First Data Page	106
Number of Data Set Repairs	0
Filename	/tmp/SAS_work58DC00003AFE_localhost.localdomain/SAS_work416700003AFE_localhost.localdomain/hepatitis.sas7bdat
Release Created	9.0401M6
Host Created	Linux
Inode Number	141611
Access Permission	rw-rw-r--
Owner Name	sasdemo
File Size	128KB
File Size (bytes)	131072

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Label
1	AGE	Num	8	BEST.	AGE
4	ALBUMIN	Num	8	BEST.	ALBUMIN
3	FATIGUE	Num	8	BEST.	FATIGUE
2	GENDER	Num	8	BEST.	GENDER

Obs	AGE	GENDER	FATIGUE	ALBUMIN
1	30	kvinna	ja	4
2	50	man	nej	3.5
3	78	man	nej	4
4	31	man	ja	4
5	34	man	ja	4
6	34	man	ja	4
7	39	man	nej	4.4
8	30	man	ja	3.9
9	39	man	ja	4.4
10	32	man	nej	3.7
11	41	man	nej	3.9
12	30	man	nej	4.9
13	38	man	nej	2.9
14	66	man	nej	4.3
15	40	man	nej	4
16	38	man	ja	4.1
17	38	man	ja	4.2
18	22	kvinna	nej	4.2
19	27	man	nej	4.1
20	31	man	ja	4
21	42	man	ja	4.7
22	25	kvinna	ja	4.3
23	27	man	nej	3.8
24	49	man	nej	3.7
25	58	kvinna	nej	2.7
26	61	man	nej	3.8
27	51	man	nej	4.6
28	41	kvinna	nej	5
29	26	kvinna	ja	3.8
30	35	man	nej	4.3
31	23	man	nej	4.1
32	20	kvinna	nej	3.9
33	42	man	ja	4
34	65	man	nej	2.9
35	52	man	ja	4
36	33	man	ja	4.4
37	56	man	nej	4.4
38	28	man	nej	4.4
39	37	man	ja	3.8
40	28	kvinna	nej	3.3

41	36	man	ja	4.2
42	38	man	nej	4.2
43	39	man	ja	4
44	39	man	ja	4
45	44	man	ja	4.4
46	40	man	nej	4
47	30	man	nej	4.2
48	30	man	ja	3.9
49	64	man	nej	4.3
50	37	man	ja	4.5
51	32	man	ja	4
52	32	man	nej	3.4
53	36	man	ja	3.1
54	49	man	nej	3.5
55	27	man	ja	4.2
56	56	man	ja	3
57	39	man	nej	4
58	44	man	nej	3.7
59	24	man	ja	4.3
60	36	man	nej	4
61	50	man	ja	5.3
62	32	man	nej	4.1
63	34	kvinna	ja	4
64	34	man	nej	4.4
65	28	man	ja	4.9
66	23	man	nej	4.8
67	36	man	ja	4.2
68	30	man	ja	4
69	62	kvinna	nej	3.9
70	28	man	nej	4
71	38	man	nej	4.4
72	50	kvinna	nej	3.4
73	52	man	ja	2.9
74	40	man	nej	4.2
75	30	man	nej	3.9
76	44	man	nej	3.5
77	27	man	nej	3
78	51	man	nej	3.9
79	25	man	ja	6.4
80	54	man	ja	3.6
81	7	man	ja	4.2

82	52	man	nej	4
83	45	man	nej	3
84	36	man	ja	3.3
85	24	man	nej	4.1
86	50	man	ja	3.9
87	54	man	nej	3.8
88	20	man	nej	2.9
89	37	man	nej	4.3
90	50	man	ja	4
91	34	kvinna	nej	4.1
92	54	man	nej	3.1
93	54	man	ja	4.5
94	48	man	nej	3.8
95	72	man	nej	3.4
96	25	man	nej	4.5
97	51	man	ja	4.5
98	38	man	ja	3.5
99	45	man	ja	4.2
100	36	man	nej	2.7
101	51	man	nej	3
102	31	man	nej	4.2
103	36	man	ja	4
104	44	man	nej	4.3
105	61	man	nej	4.1
106	53	kvinna	nej	4.1

The MEANS Procedure

The FREQ Procedure

FATIGUE				
FATIGUE	**Frequency**	**Percent**	**Cumulative Frequency**	**Cumulative Percent**
nej	62	58.49	62	58.49
ja	44	41.51	106	100.00

The MEANS Procedure

FATIGUE=nej

Analysis Variable : AGE AGE				
N	**Mean**	**Std Dev**	**Minimum**	**Maximum**
62	41.5645161	13.7633643	20.0000000	78.0000000

FATIGUE=ja

Analysis Variable : AGE AGE				
N	**Mean**	**Std Dev**	**Minimum**	**Maximum**
44	37.2272727	9.9624029	7.0000000	56.0000000

The MEANS Procedure

FATIGUE=nej

Analysis Variable : ALBUMIN ALBUMIN				
N	**Mean**	**Std Dev**	**Minimum**	**Maximum**
62	3.8870968	0.5342327	2.7000000	5.0000000

FATIGUE=ja

Analysis Variable : ALBUMIN ALBUMIN				
N	**Mean**	**Std Dev**	**Minimum**	**Maximum**
44	4.1045455	0.5697631	2.9000000	6.4000000

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	41.5645161	**Sum Observations**	2577
Std Deviation	13.7633643	**Variance**	189.430196
Skewness	0.52029858	**Kurtosis**	-0.3541993
Uncorrected SS	118667	**Corrected SS**	11555.2419
Coeff Variation	33.1132551	**Std Error Mean**	1.74794901

Basic Statistical Measures			
Location		**Variability**	
Mean	41.56452	**Std Deviation**	13.76336
Median	39.50000	**Variance**	189.43020
Mode	27.00000	**Range**	58.00000
		Interquartile Range	21.00000

Note: The mode displayed is the smallest of 8 modes with a count of 3.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	23.77902	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	78.0
99%	78.0
95%	65.0
90%	61.0
75% Q3	51.0
50% Median	39.5
25% Q1	30.0
10%	25.0
5%	23.0
1%	20.0
0% Min	20.0

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
20	50	64	28
20	20	65	21
22	10	66	8
23	36	72	55
23	19	78	2

The UNIVARIATE Procedure

FATIGUE=nej

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	0.14516129	**Sum Observations**	9
Std Deviation	0.35513905	**Variance**	0.12612374
Skewness	2.0649189	**Kurtosis**	2.33830082
Uncorrected SS	9	**Corrected SS**	7.69354839
Coeff Variation	244.651345	**Std Error Mean**	0.0451027

Basic Statistical Measures			
Location		**Variability**	
Mean	0.145161	**Std Deviation**	0.35514
Median	0.000000	**Variance**	0.12612
Mode	0.000000	**Range**	1.00000
		Interquartile Range	0

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	3.218461	**Pr > |t|**	0.0021
Sign	**M**	4.5	**Pr >= |M|**	0.0039
Signed Rank	**S**	22.5	**Pr >= |S|**	0.0039

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	1
99%	1
95%	1
90%	1
75% Q3	0
50% Median	0
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=nej

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
0	61	1	24
0	60	1	37
0	59	1	40
0	58	1	52
0	57	1	62

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	3.88709677	**Sum Observations**	241
Std Deviation	0.53423267	**Variance**	0.28540455
Skewness	-0.5032828	**Kurtosis**	-0.1209331
Uncorrected SS	954.2	**Corrected SS**	17.4096774
Coeff Variation	13.7437451	**Std Error Mean**	0.06784762

Basic Statistical Measures			
Location		**Variability**	
Mean	3.887097	**Std Deviation**	0.53423
Median	4.000000	**Variance**	0.28540
Mode	4.000000	**Range**	2.30000
		Interquartile Range	0.70000

Note: The mode displayed is the smallest of 2 modes with a count of 7.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	57.29157	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	5.0
99%	5.0
95%	4.6
90%	4.4
75% Q3	4.2
50% Median	4.0
25% Q1	3.5
10%	3.0
5%	2.9
1%	2.7
0% Min	2.7

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
2.7	57	4.5	56
2.7	14	4.6	16
2.9	50	4.8	36
2.9	21	4.9	6
2.9	7	5.0	17

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	37.2272727	**Sum Observations**	1638
Std Deviation	9.9624029	**Variance**	99.2494715
Skewness	-0.1675609	**Kurtosis**	0.74188209
Uncorrected SS	65246	**Corrected SS**	4267.72727
Coeff Variation	26.7610334	**Std Error Mean**	1.50188875

Basic Statistical Measures			
Location		**Variability**	
Mean	37.22727	**Std Deviation**	9.96240
Median	36.00000	**Variance**	99.24947
Mode	36.00000	**Range**	49.00000
		Interquartile Range	12.50000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	24.78697	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	56.0
99%	56.0
95%	54.0
90%	52.0
75% Q3	43.0
50% Median	36.0
25% Q1	30.5
10%	26.0
5%	25.0
1%	7.0
0% Min	7.0

Extreme Observations

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
7	98	52	76
24	89	52	95
25	96	54	97
25	73	54	102
26	74	56	88

The UNIVARIATE Procedure

FATIGUE=ja

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	0.09090909	**Sum Observations**	4
Std Deviation	0.29080336	**Variance**	0.0845666
Skewness	2.94749981	**Kurtosis**	7.0043554
Uncorrected SS	4	**Corrected SS**	3.63636364
Coeff Variation	319.8837	**Std Error Mean**	0.04384026

Basic Statistical Measures			
Location		**Variability**	
Mean	0.090909	**Std Deviation**	0.29080
Median	0.000000	**Variance**	0.08457
Mode	0.000000	**Range**	1.00000
		Interquartile Range	0

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	2.073644	**Pr > |t|**	0.0441
Sign	**M**	2	**Pr >= |M|**	0.1250
Signed Rank	**S**	5	**Pr >= |S|**	0.1250

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	1
99%	1
95%	1
90%	0
75% Q3	0
50% Median	0
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
0	106	0	106
0	105	1	63
0	104	1	73
0	103	1	74
0	102	1	91

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	4.10454545	**Sum Observations**	180.6
Std Deviation	0.56976313	**Variance**	0.32463002
Skewness	1.28079903	**Kurtosis**	5.83342036
Uncorrected SS	755.24	**Corrected SS**	13.9590909
Coeff Variation	13.8812722	**Std Error Mean**	0.08589502

Basic Statistical Measures			
Location		**Variability**	
Mean	4.104545	**Std Deviation**	0.56976
Median	4.000000	**Variance**	0.32463
Mode	4.000000	**Range**	3.50000
		Interquartile Range	0.35000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	47.7856	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	6.40
99%	6.40
95%	4.90
90%	4.50
75% Q3	4.30
50% Median	4.00
25% Q1	3.95
10%	3.50
5%	3.10
1%	2.90
0% Min	2.90

Extreme Observations

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
2.9	95	4.5	103
3.0	88	4.7	72
3.1	86	4.9	92
3.3	99	5.3	90
3.5	104	6.4	96

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	41.5645161	**Sum Observations**	2577
Std Deviation	13.7633643	**Variance**	189.430196
Skewness	0.52029858	**Kurtosis**	-0.3541993
Uncorrected SS	118667	**Corrected SS**	11555.2419
Coeff Variation	33.1132551	**Std Error Mean**	1.74794901

Basic Statistical Measures			
Location		**Variability**	
Mean	41.56452	**Std Deviation**	13.76336
Median	39.50000	**Variance**	189.43020
Mode	27.00000	**Range**	58.00000
		Interquartile Range	21.00000

Note: The mode displayed is the smallest of 8 modes with a count of 3.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	23.77902	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	78.0
99%	78.0
95%	65.0
90%	61.0
75% Q3	51.0
50% Median	39.5
25% Q1	30.0
10%	25.0
5%	23.0
1%	20.0
0% Min	20.0

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
20	50	64	28
20	20	65	21
22	10	66	8
23	36	72	55
23	19	78	2

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	0.14516129	**Sum Observations**	9
Std Deviation	0.35513905	**Variance**	0.12612374
Skewness	2.0649189	**Kurtosis**	2.33830082
Uncorrected SS	9	**Corrected SS**	7.69354839
Coeff Variation	244.651345	**Std Error Mean**	0.0451027

Basic Statistical Measures			
Location		**Variability**	
Mean	0.145161	**Std Deviation**	0.35514
Median	0.000000	**Variance**	0.12612
Mode	0.000000	**Range**	1.00000
		Interquartile Range	0

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	3.218461	**Pr > |t|**	0.0021
Sign	**M**	4.5	**Pr >= |M|**	0.0039
Signed Rank	**S**	22.5	**Pr >= |S|**	0.0039

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	1
99%	1
95%	1
90%	1
75% Q3	0
50% Median	0
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=nej

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
0	61	1	24
0	60	1	37
0	59	1	40
0	58	1	52
0	57	1	62

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	3.88709677	**Sum Observations**	241
Std Deviation	0.53423267	**Variance**	0.28540455
Skewness	-0.5032828	**Kurtosis**	-0.1209331
Uncorrected SS	954.2	**Corrected SS**	17.4096774
Coeff Variation	13.7437451	**Std Error Mean**	0.06784762

Basic Statistical Measures			
Location		**Variability**	
Mean	3.887097	**Std Deviation**	0.53423
Median	4.000000	**Variance**	0.28540
Mode	4.000000	**Range**	2.30000
		Interquartile Range	0.70000

Note: The mode displayed is the smallest of 2 modes with a count of 7.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	57.29157	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	5.0
99%	5.0
95%	4.6
90%	4.4
75% Q3	4.2
50% Median	4.0
25% Q1	3.5
10%	3.0
5%	2.9
1%	2.7
0% Min	2.7

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
2.7	57	4.5	56
2.7	14	4.6	16
2.9	50	4.8	36
2.9	21	4.9	6
2.9	7	5.0	17

The UNIVARIATE Procedure

FATIGUE=nej

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	37.2272727	**Sum Observations**	1638
Std Deviation	9.9624029	**Variance**	99.2494715
Skewness	-0.1675609	**Kurtosis**	0.74188209
Uncorrected SS	65246	**Corrected SS**	4267.72727
Coeff Variation	26.7610334	**Std Error Mean**	1.50188875

Basic Statistical Measures			
Location		**Variability**	
Mean	37.22727	**Std Deviation**	9.96240
Median	36.00000	**Variance**	99.24947
Mode	36.00000	**Range**	49.00000
		Interquartile Range	12.50000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	24.78697	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	56.0
99%	56.0
95%	54.0
90%	52.0
75% Q3	43.0
50% Median	36.0
25% Q1	30.5
10%	26.0
5%	25.0
1%	7.0
0% Min	7.0

Extreme Observations

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
7	98	52	76
24	89	52	95
25	96	54	97
25	73	54	102
26	74	56	88

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	0.09090909	**Sum Observations**	4
Std Deviation	0.29080336	**Variance**	0.0845666
Skewness	2.94749981	**Kurtosis**	7.0043554
Uncorrected SS	4	**Corrected SS**	3.63636364
Coeff Variation	319.8837	**Std Error Mean**	0.04384026

Basic Statistical Measures			
Location		**Variability**	
Mean	0.090909	**Std Deviation**	0.29080
Median	0.000000	**Variance**	0.08457
Mode	0.000000	**Range**	1.00000
		Interquartile Range	0

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	2.073644	**Pr > |t|**	0.0441
Sign	**M**	2	**Pr >= |M|**	0.1250
Signed Rank	**S**	5	**Pr >= |S|**	0.1250

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	1
99%	1
95%	1
90%	0
75% Q3	0
50% Median	0
25% Q1	0
10%	0
5%	0
1%	0
0% Min	0

Extreme Observations

The UNIVARIATE Procedure
Variable: GENDER (GENDER)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
0	106	0	106
0	105	1	63
0	104	1	73
0	103	1	74
0	102	1	91

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	4.10454545	**Sum Observations**	180.6
Std Deviation	0.56976313	**Variance**	0.32463002
Skewness	1.28079903	**Kurtosis**	5.83342036
Uncorrected SS	755.24	**Corrected SS**	13.9590909
Coeff Variation	13.8812722	**Std Error Mean**	0.08589502

Basic Statistical Measures			
Location		**Variability**	
Mean	4.104545	**Std Deviation**	0.56976
Median	4.000000	**Variance**	0.32463
Mode	4.000000	**Range**	3.50000
		Interquartile Range	0.35000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	47.7856	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	6.40
99%	6.40
95%	4.90
90%	4.50
75% Q3	4.30
50% Median	4.00
25% Q1	3.95
10%	3.50
5%	3.10
1%	2.90
0% Min	2.90

Extreme Observations

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
2.9	95	4.5	103
3.0	88	4.7	72
3.1	86	4.9	92
3.3	99	5.3	90
3.5	104	6.4	96

The UNIVARIATE Procedure

FATIGUE=ja

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	41.5645161	**Sum Observations**	2577
Std Deviation	13.7633643	**Variance**	189.430196
Skewness	0.52029858	**Kurtosis**	-0.3541993
Uncorrected SS	118667	**Corrected SS**	11555.2419
Coeff Variation	33.1132551	**Std Error Mean**	1.74794901

Basic Statistical Measures			
Location		**Variability**	
Mean	41.56452	**Std Deviation**	13.76336
Median	39.50000	**Variance**	189.43020
Mode	27.00000	**Range**	58.00000
		Interquartile Range	21.00000

Note: The mode displayed is the smallest of 8 modes with a count of 3.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	23.77902	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	78.0
99%	78.0
95%	65.0
90%	61.0
75% Q3	51.0
50% Median	39.5
25% Q1	30.0
10%	25.0
5%	23.0
1%	20.0
0% Min	20.0

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=nej

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
20	50	64	28
20	20	65	21
22	10	66	8
23	36	72	55
23	19	78	2

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	37.2272727	**Sum Observations**	1638
Std Deviation	9.9624029	**Variance**	99.2494715
Skewness	-0.1675609	**Kurtosis**	0.74188209
Uncorrected SS	65246	**Corrected SS**	4267.72727
Coeff Variation	26.7610334	**Std Error Mean**	1.50188875

Basic Statistical Measures			
Location		**Variability**	
Mean	37.22727	**Std Deviation**	9.96240
Median	36.00000	**Variance**	99.24947
Mode	36.00000	**Range**	49.00000
		Interquartile Range	12.50000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	24.78697	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	56.0
99%	56.0
95%	54.0
90%	52.0
75% Q3	43.0
50% Median	36.0
25% Q1	30.5
10%	26.0
5%	25.0
1%	7.0
0% Min	7.0

Extreme Observations

The UNIVARIATE Procedure
Variable: AGE (AGE)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
7	98	52	76
24	89	52	95
25	96	54	97
25	73	54	102
26	74	56	88

The UNIVARIATE Procedure

FATIGUE=ja

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Moments			
N	62	**Sum Weights**	62
Mean	3.88709677	**Sum Observations**	241
Std Deviation	0.53423267	**Variance**	0.28540455
Skewness	-0.5032828	**Kurtosis**	-0.1209331
Uncorrected SS	954.2	**Corrected SS**	17.4096774
Coeff Variation	13.7437451	**Std Error Mean**	0.06784762

Basic Statistical Measures			
Location		**Variability**	
Mean	3.887097	**Std Deviation**	0.53423
Median	4.000000	**Variance**	0.28540
Mode	4.000000	**Range**	2.30000
		Interquartile Range	0.70000

Note: The mode displayed is the smallest of 2 modes with a count of 7.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	57.29157	**Pr > |t|**	<.0001
Sign	**M**	31	**Pr >= |M|**	<.0001
Signed Rank	**S**	976.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	5.0
99%	5.0
95%	4.6
90%	4.4
75% Q3	4.2
50% Median	4.0
25% Q1	3.5
10%	3.0
5%	2.9
1%	2.7
0% Min	2.7

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=nej

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
2.7	57	4.5	56
2.7	14	4.6	16
2.9	50	4.8	36
2.9	21	4.9	6
2.9	7	5.0	17

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Moments			
N	44	**Sum Weights**	44
Mean	4.10454545	**Sum Observations**	180.6
Std Deviation	0.56976313	**Variance**	0.32463002
Skewness	1.28079903	**Kurtosis**	5.83342036
Uncorrected SS	755.24	**Corrected SS**	13.9590909
Coeff Variation	13.8812722	**Std Error Mean**	0.08589502

Basic Statistical Measures			
Location		**Variability**	
Mean	4.104545	**Std Deviation**	0.56976
Median	4.000000	**Variance**	0.32463
Mode	4.000000	**Range**	3.50000
		Interquartile Range	0.35000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	47.7856	**Pr > |t|**	<.0001
Sign	**M**	22	**Pr >= |M|**	<.0001
Signed Rank	**S**	495	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	6.40
99%	6.40
95%	4.90
90%	4.50
75% Q3	4.30
50% Median	4.00
25% Q1	3.95
10%	3.50
5%	3.10
1%	2.90
0% Min	2.90

Extreme Observations

The UNIVARIATE Procedure
Variable: ALBUMIN (ALBUMIN)

FATIGUE=ja

Lowest		Highest	
Value	**Obs**	**Value**	**Obs**
2.9	95	4.5	103
3.0	88	4.7	72
3.1	86	4.9	92
3.3	99	5.3	90
3.5	104	6.4	96

The UNIVARIATE Procedure

FATIGUE=ja

The FREQ Procedure

The FREQ Procedure

Deluppgift 2.1

Table of FATIGUE by GENDER			
FATIGUE(FATIGUE)	**GENDER(GENDER)**		
Frequency **Percent** **Row Pct** **Col Pct**	**man**	**kvinna**	**Total**
nej	53 50.00 85.48 56.99	9 8.49 14.52 69.23	62 58.49
ja	40 37.74 90.91 43.01	4 3.77 9.09 30.77	44 41.51
Total	93 87.74	13 12.26	106 100.00

Statistics for Table of FATIGUE by GENDER

Column 1 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.8548	0.0447	0.7672	0.9425	0.7422	0.9314
Row 2	0.9091	0.0433	0.8241	0.9940	0.7833	0.9747
Total	0.8774	0.0319	0.8149	0.9398	0.7994	0.9331
Difference	-0.0543	0.0623	-0.1763	0.0678		
Difference is (Row 1 - Row 2)						

Risk Difference Test	
H0: P1 - P2 = 0	Wald Method
Risk Difference	-0.0543
ASE (H0)	0.0647
Z	-0.8390
One-sided Pr < Z	0.2007
Two-sided Pr > |Z|	0.4015
Column 1 (GENDER = man)	

Column 2 Risk Estimates						
	Risk	ASE	95% Confidence Limits		Exact 95% Confidence Limits	
Row 1	0.1452	0.0447	0.0575	0.2328	0.0686	0.2578
Row 2	0.0909	0.0433	0.0060	0.1759	0.0253	0.2167
Total	0.1226	0.0319	0.0602	0.1851	0.0669	0.2006
Difference	0.0543	0.0623	-0.0678	0.1763		
Difference is (Row 1 - Row 2)						

Sample Size = 106

Svar: Nollhypotesen H0= p=0 innebär att trötthetsproportionen inte beror på kön. Då fick vi

One-sided Pr < Z	0.2007

Och vi kan inte förkasta nollhypotesen och därför anta att trötthetsproportionen inte beror på kön då signifikantnivå är 0,05 som är mindre än 0,2007 .

Medelvärde av ålder för kvinnor och man:

Analysis Variable : AGE AGE		
Lower 95% CL for Mean	Upper 95% CL for Mean	Mean
37.3640855	42.1642164	39.7641509

Deluppgift 2.2.

The MEANS Procedure

Analysis Variable : ALBUMIN		
Lower 95% CL for Mean	Upper 95% CL for Mean	Mean
3.8700713	4.0846457	3.9773585

The MEANS Procedure

Analysis Variable : ALBUMIN		
Lower 90% CL for Mean	Upper 90% CL for Mean	Mean
3.8875656	4.0671513	3.9773585

Svar: Detta ger oss två olika felmarginaler, där ett 90% konfidensintervall ger felmarginalen 0,089 och ett 95% konfidensintervall ger oss felmarginalen 0,106. Intervallskattning av medelvärdet 3.977 kommer att bli bredare med ett 95% konfidensintervall.

Deluppgift 2.3 a) Vi antar att Ho=3,5

Ha>3,5, alpha= 0,05 som ger oss t(kr)=1,65

N	Mean	Std Dev	Std Err	Minimum	Maximum
106	3.9774	0.5571	0.0541	2.7000	6.4000

Mean	95% CL Mean		Std Dev	95% CL Std Dev	
3.9774	3.8701	4.0846	0.5571	0.4909	0.6441

DF	t Value	Pr > |t|
105	8.82	<.0001

Svar: Enligt resultaten är t(obs)(t value)= 8.82 alltså t(obs)8.82 >t(kr)1.65 vilket betyder att vi ska förkasta Ho och acceptera Ha.
På annat sätt kan vi bekräfta det genom att kolla på:

Pr > |t|
<.0001

som är mindre än alpha 0.05 och då kan vi också konstatera att Ha är sann.

Deluppgift 2.3 b)

FATIGUE	Method	N	Mean	Std Dev	Std Err	Minimum	Maximum
nej		62	3.8871	0.5342	0.0678	2.7000	5.0000
ja		44	4.1045	0.5698	0.0859	2.9000	6.4000
Diff (1-2)	Pooled		-0.2174	0.5492	0.1083		
Diff (1-2)	Satterthwaite		-0.2174		0.1095		

FATIGUE	Method	Mean	95% CL Mean		Std Dev	95% CL Std Dev	
nej		3.8871	3.7514	4.0228	0.5342	0.4540	0.6492
ja		4.1045	3.9313	4.2778	0.5698	0.4708	0.7219

Diff (1-2)	**Pooled**	-0.2174	-0.4321	-0.00277	0.5492	0.4836	0.6355
Diff (1-2)	**Satterthwaite**	-0.2174	-0.4349	0.000045			

Method	**Variances**	**DF**	**t Value**	**Pr > |t|**
Pooled	Equal	104	-34.34	<.0001
Satterthwaite	Unequal	88.98	-33.96	<.0001

Equality of Variances				
Method	**Num DF**	**Den DF**	**F Value**	**Pr > F**
Folded F	43	61	1.14	0.6363

Svar:
Enligt resultaten patienter med albumin =3,5 var inte trötta.