**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:

|  |  |  |  |
| --- | --- | --- | --- |
| För- och efternamn | Pnr | Mobilnr | E–mail |
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*Övningslärarens anteckningar*:

**Resultat efter första rättningen**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Godkänt |  | Komplettering | 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%. | | | | | |  |  |  |  |  |  |
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**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 |









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

**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 |

**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 |

| **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 |

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| ***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 |

| **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 |



| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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 |

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| ***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 |

| **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 |

| **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** | | | |
| --- | --- | --- | --- |
| **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 |



| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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 |

| **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 |

| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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 |

| **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 |



| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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** | | | |
| --- | --- | --- | --- |
| **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 |

| **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** | | | |
| --- | --- | --- | --- |
| **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 |



| **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 |

| **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 |



| **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** | | | |
| --- | --- | --- | --- |
| **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 |





| **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 |

| **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 |



| **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** | | | |
| --- | --- | --- | --- |
| **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 |







**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.