EXAMINE VARIABLES=Nilai BY Kelas

/PLOT BOXPLOT STEMLEAF NPPLOT

/COMPARE GROUPS

/STATISTICS DESCRIPTIVES

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

**Explore**

|  |  |  |
| --- | --- | --- |
| **Notes** | | |
| Output Created | | 07-JUL-2025 17:14:18 |
| Comments | |  |
| Input | Active Dataset | DataSet0 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 120 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=Nilai BY Kelas  /PLOT BOXPLOT STEMLEAF NPPLOT  /COMPARE GROUPS  /STATISTICS DESCRIPTIVES  /CINTERVAL 95  /MISSING LISTWISE  /NOTOTAL. |
| Resources | Processor Time | 00:00:03,37 |
| Elapsed Time | 00:00:02,58 |

[DataSet0]

**Kelas**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Kelas | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Nilai | 1 | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |
| 2 | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |
| 3 | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |
| 4 | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | Kelas | | | Statistic | Std. Error |
| Nilai | 1 | Mean | | 56.53 | 4.133 |
| 95% Confidence Interval for Mean | Lower Bound | 48.08 |  |
| Upper Bound | 64.99 |  |
| 5% Trimmed Mean | | 56.11 |  |
| Median | | 51.50 |  |
| Variance | | 512.464 |  |
| Std. Deviation | | 22.638 |  |
| Minimum | | 23 |  |
| Maximum | | 100 |  |
| Range | | 77 |  |
| Interquartile Range | | 34 |  |
| Skewness | | .426 | .427 |
| Kurtosis | | -.882 | .833 |
| 2 | Mean | | 82.83 | 2.140 |
| 95% Confidence Interval for Mean | Lower Bound | 78.46 |  |
| Upper Bound | 87.21 |  |
| 5% Trimmed Mean | | 83.26 |  |
| Median | | 83.00 |  |
| Variance | | 137.385 |  |
| Std. Deviation | | 11.721 |  |
| Minimum | | 57 |  |
| Maximum | | 100 |  |
| Range | | 43 |  |
| Interquartile Range | | 16 |  |
| Skewness | | -.434 | .427 |
| Kurtosis | | -.483 | .833 |
| 3 | Mean | | 62.73 | 3.137 |
| 95% Confidence Interval for Mean | Lower Bound | 56.32 |  |
| Upper Bound | 69.15 |  |
| 5% Trimmed Mean | | 62.35 |  |
| Median | | 63.00 |  |
| Variance | | 295.168 |  |
| Std. Deviation | | 17.180 |  |
| Minimum | | 30 |  |
| Maximum | | 100 |  |
| Range | | 70 |  |
| Interquartile Range | | 21 |  |
| Skewness | | .286 | .427 |
| Kurtosis | | -.265 | .833 |
| 4 | Mean | | 88.23 | 1.445 |
| 95% Confidence Interval for Mean | Lower Bound | 85.28 |  |
| Upper Bound | 91.19 |  |
| 5% Trimmed Mean | | 88.54 |  |
| Median | | 87.00 |  |
| Variance | | 62.599 |  |
| Std. Deviation | | 7.912 |  |
| Minimum | | 70 |  |
| Maximum | | 100 |  |
| Range | | 30 |  |
| Interquartile Range | | 14 |  |
| Skewness | | -.265 | .427 |
| Kurtosis | | -.401 | .833 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Tests of Normality** | | | | | | | |
|  | Kelas | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| Statistic | df | Sig. | Statistic | df | Sig. |
| Nilai | 1 | .162 | 30 | .043 | .936 | 30 | .071 |
| 2 | .140 | 30 | .135 | .951 | 30 | .180 |
| 3 | .114 | 30 | .200\* | .976 | 30 | .705 |
| 4 | .133 | 30 | .188 | .945 | 30 | .126 |

|  |
| --- |
| \*. This is a lower bound of the true significance. |
| a. Lilliefors Significance Correction |

**Nilai**

**Stem-and-Leaf Plots**

Nilai Stem-and-Leaf Plot for

Kelas= 1

Frequency Stem & Leaf

2,00 2 . 33

6,00 3 . 000777

4,00 4 . 3377

7,00 5 . 0003337

1,00 6 . 7

4,00 7 . 0003

1,00 8 . 7

4,00 9 . 0033

1,00 10 . 0

Stem width: 10

Each leaf: 1 case(s)

Nilai Stem-and-Leaf Plot for

Kelas= 2

Frequency Stem & Leaf

1,00 5 . 7

4,00 6 . 0777

6,00 7 . 377777

9,00 8 . 003333777

8,00 9 . 33333777

2,00 10 . 00

Stem width: 10

Each leaf: 1 case(s)

Nilai Stem-and-Leaf Plot for

Kelas= 3

Frequency Stem & Leaf

1,00 3 . 0

5,00 4 . 00037

6,00 5 . 003333

6,00 6 . 003377

7,00 7 . 0000037

3,00 8 . 337

1,00 9 . 7

1,00 10 . 0

Stem width: 10

Each leaf: 1 case(s)

Nilai Stem-and-Leaf Plot for

Kelas= 4

Frequency Stem & Leaf

2,00 7 . 03

,00 7 .

9,00 8 . 000333333

6,00 8 . 777777

5,00 9 . 00333

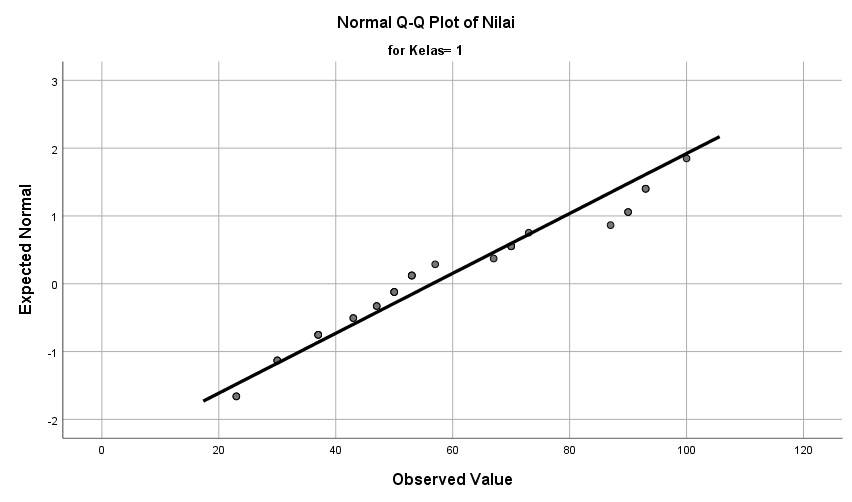
5,00 9 . 77777

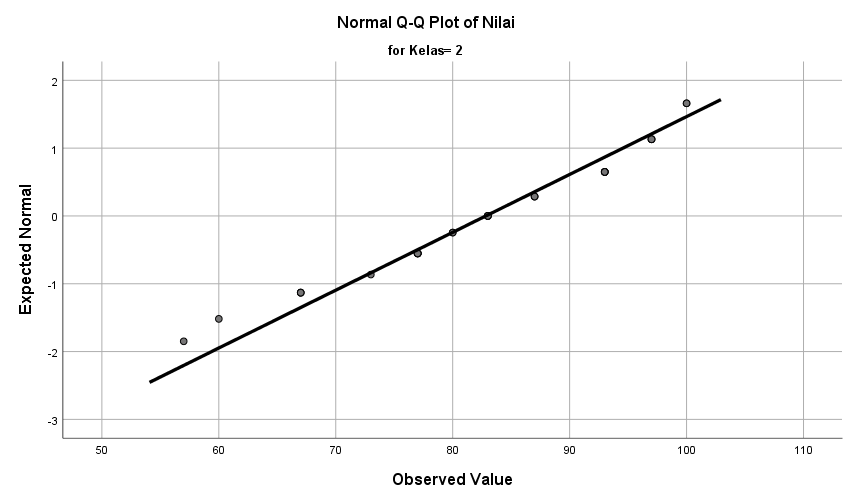
3,00 10 . 000

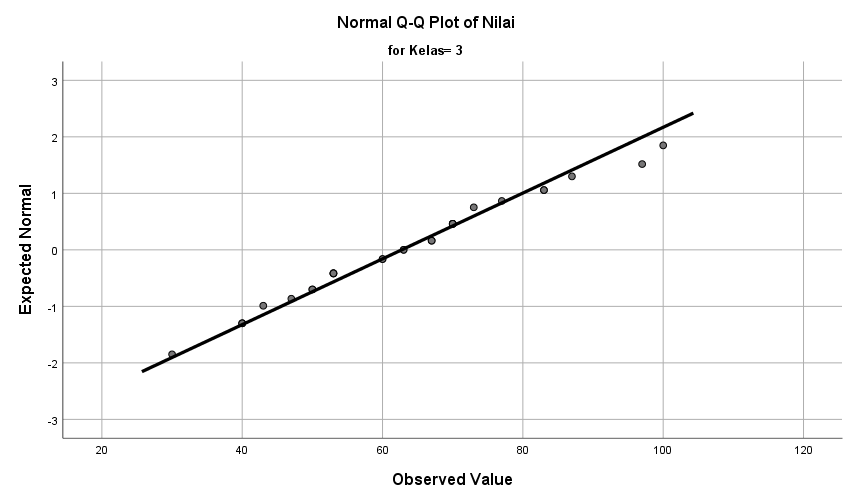
Stem width: 10

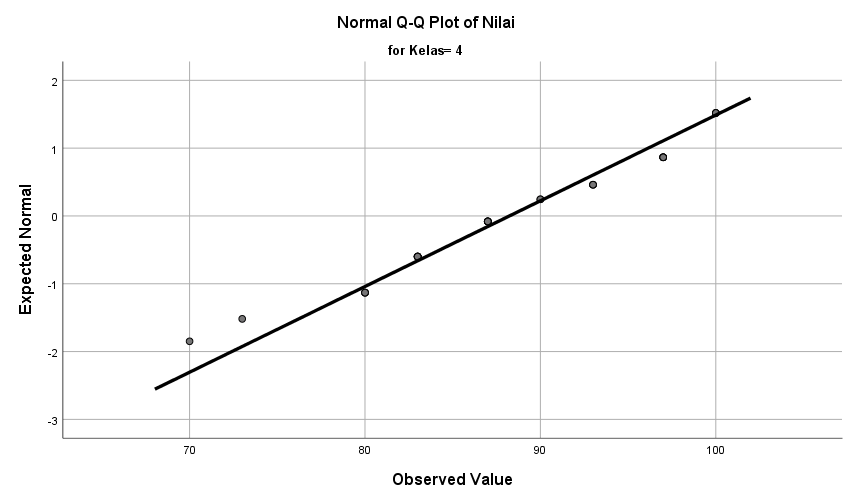
Each leaf: 1 case(s)

**Normal Q-Q Plots**

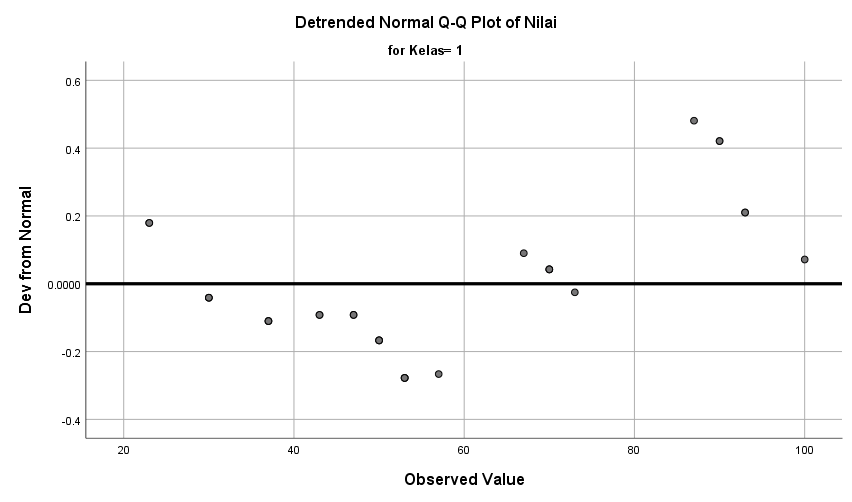


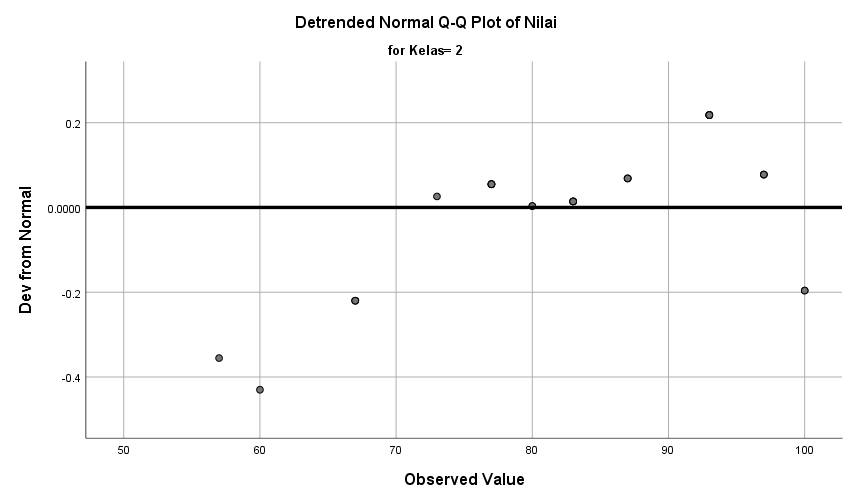


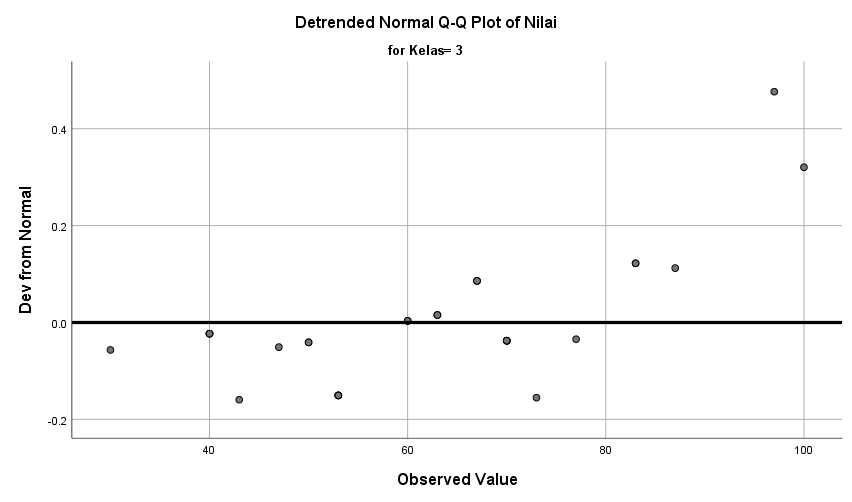


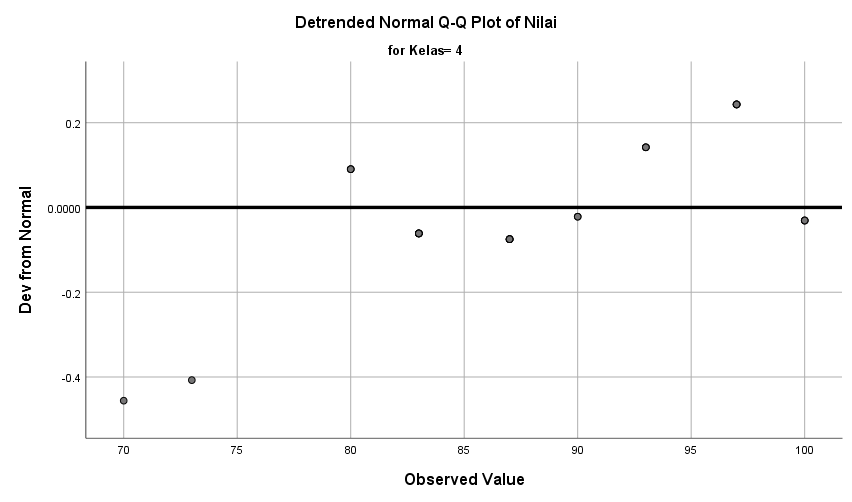


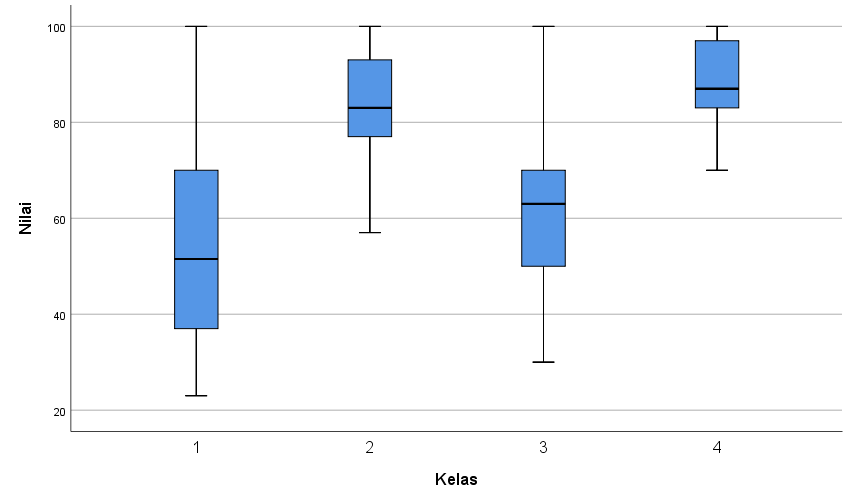
**Detrended Normal Q-Q Plots**











EXAMINE VARIABLES=Nilai BY Kelas

/PLOT BOXPLOT STEMLEAF SPREADLEVEL

/COMPARE GROUPS

/STATISTICS DESCRIPTIVES

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

**Explore**

|  |  |  |
| --- | --- | --- |
| **Notes** | | |
| Output Created | | 08-JUL-2025 00:10:07 |
| Comments | |  |
| Input | Active Dataset | DataSet0 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 60 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=Nilai BY Kelas  /PLOT BOXPLOT STEMLEAF SPREADLEVEL  /COMPARE GROUPS  /STATISTICS DESCRIPTIVES  /CINTERVAL 95  /MISSING LISTWISE  /NOTOTAL. |
| Resources | Processor Time | 00:00:02,05 |
| Elapsed Time | 00:00:01,24 |

[DataSet0]

**Kelas**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Case Processing Summary** | | | | | | | |
|  | Kelas | Cases | | | | | |
| Valid | | Missing | | Total | |
| N | Percent | N | Percent | N | Percent |
| Nilai | Postest Kelas Kontrol | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |
| Postest Kelas Eksperimen | 30 | 100.0% | 0 | 0.0% | 30 | 100.0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Descriptives** | | | | | |
|  | Kelas | | | Statistic | Std. Error |
| Nilai | Postest Kelas Kontrol | Mean | | 82.83 | 2.140 |
| 95% Confidence Interval for Mean | Lower Bound | 78.46 |  |
| Upper Bound | 87.21 |  |
| 5% Trimmed Mean | | 83.26 |  |
| Median | | 83.00 |  |
| Variance | | 137.385 |  |
| Std. Deviation | | 11.721 |  |
| Minimum | | 57 |  |
| Maximum | | 100 |  |
| Range | | 43 |  |
| Interquartile Range | | 16 |  |
| Skewness | | -.434 | .427 |
| Kurtosis | | -.483 | .833 |
| Postest Kelas Eksperimen | Mean | | 88.23 | 1.445 |
| 95% Confidence Interval for Mean | Lower Bound | 85.28 |  |
| Upper Bound | 91.19 |  |
| 5% Trimmed Mean | | 88.54 |  |
| Median | | 87.00 |  |
| Variance | | 62.599 |  |
| Std. Deviation | | 7.912 |  |
| Minimum | | 70 |  |
| Maximum | | 100 |  |
| Range | | 30 |  |
| Interquartile Range | | 14 |  |
| Skewness | | -.265 | .427 |
| Kurtosis | | -.401 | .833 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test of Homogeneity of Variance** | | | | | |
|  | | Levene Statistic | df1 | df2 | Sig. |
| Nilai | Based on Mean | 3.913 | 1 | 58 | .053 |
| Based on Median | 4.044 | 1 | 58 | .049 |
| Based on Median and with adjusted df | 4.044 | 1 | 52.072 | .050 |
| Based on trimmed mean | 3.868 | 1 | 58 | .054 |

**Nilai**

**Stem-and-Leaf Plots**

Nilai Stem-and-Leaf Plot for

Kelas= Postest Kelas Kontrol

Frequency Stem & Leaf

1,00 5 . 7

4,00 6 . 0777

6,00 7 . 377777

9,00 8 . 003333777

8,00 9 . 33333777

2,00 10 . 00

Stem width: 10

Each leaf: 1 case(s)

Nilai Stem-and-Leaf Plot for

Kelas= Postest Kelas Eksperimen

Frequency Stem & Leaf

2,00 7 . 03

,00 7 .

9,00 8 . 000333333

6,00 8 . 777777

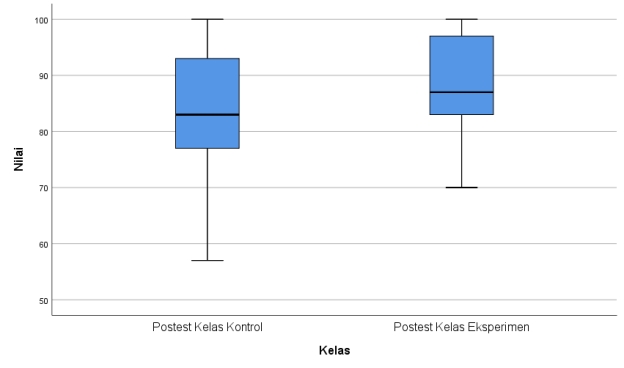
5,00 9 . 00333

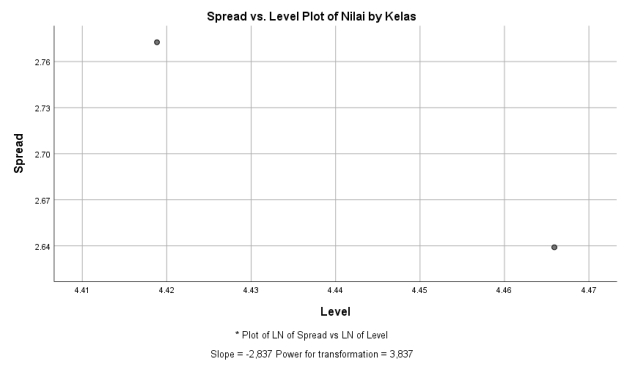
5,00 9 . 77777

3,00 10 . 000

Stem width: 10

Each leaf: 1 case(s)





T-TEST GROUPS=Kelas(1 2)

/MISSING=ANALYSIS

/VARIABLES=Nilai

/CRITERIA=CI(.95).

**T-Test**

|  |  |  |
| --- | --- | --- |
| **Notes** | | |
| Output Created | | 08-JUL-2025 00:01:06 |
| Comments | |  |
| Input | Active Dataset | DataSet0 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 60 |
| Missing Value Handling | Definition of Missing | User defined missing values are treated as missing. |
| Cases Used | Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis. |
| Syntax | | T-TEST GROUPS=Kelas(1 2)  /MISSING=ANALYSIS  /VARIABLES=Nilai  /CRITERIA=CI(.95). |
| Resources | Processor Time | 00:00:00,02 |
| Elapsed Time | 00:00:00,08 |

[DataSet0]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group Statistics** | | | | | |
|  | Kelas | N | Mean | Std. Deviation | Std. Error Mean |
| Nilai | Postest\_Kontrol | 30 | 82.83 | 11.721 | 2.140 |
| Postest\_Eksperimen | 30 | 88.23 | 7.912 | 1.445 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Independent Samples Test** | | | | | | | | | | |
|  | | Levene's Test for Equality of Variances | | t-test for Equality of Means | |  |  |  |  |  |
| F | Sig. | t | df |  |  |  |  |  |
|  |  |  |  |  |
| Nilai | Equal variances assumed | 3.913 | .053 | -2.091 | 58 |  |  |  |  |  |
| Equal variances not assumed |  |  | -2.091 | 50.884 |  |  |  |  |  |

T-TEST PAIRS=Pretest WITH Postest (PAIRED)

/CRITERIA=CI(.9500)

/MISSING=ANALYSIS.

**T-Test**

|  |  |  |
| --- | --- | --- |
| **Notes** | | |
| Output Created | | 07-JUL-2025 23:43:09 |
| Comments | |  |
| Input | Active Dataset | DataSet0 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 60 |
| Missing Value Handling | Definition of Missing | User defined missing values are treated as missing. |
| Cases Used | Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis. |
| Syntax | | T-TEST PAIRS=Pretest WITH Postest (PAIRED)  /CRITERIA=CI(.9500)  /MISSING=ANALYSIS. |
| Resources | Processor Time | 00:00:00,02 |
| Elapsed Time | 00:00:00,02 |

[DataSet0]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Paired Samples Statistics** | | | | | |
|  | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Pretest | 75.48 | 60 | 18.471 | 2.385 |
| Postest | 1.50 | 60 | .504 | .065 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Paired Samples Correlations** | | | | |
|  | | N | Correlation | Sig. |
| Pair 1 | Pretest & Postest | 60 | .696 | .000 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paired Samples Test** | | | | | | | | | |
|  | | Paired Differences | | | | |  |  |  |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |  |  |  |
| Lower | Upper |  |  |  |
| Pair 1 | Pretest - Postest | 73.983 | 18.123 | 2.340 | 69.302 | 78.665 |  |  |  |

T-TEST PAIRS=Pretest WITH Postest (PAIRED)

/CRITERIA=CI(.9500)

/MISSING=ANALYSIS.

**T-Test**

|  |  |  |
| --- | --- | --- |
| **Notes** | | |
| Output Created | | 07-JUL-2025 23:49:54 |
| Comments | |  |
| Input | Active Dataset | DataSet0 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 60 |
| Missing Value Handling | Definition of Missing | User defined missing values are treated as missing. |
| Cases Used | Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis. |
| Syntax | | T-TEST PAIRS=Pretest WITH Postest (PAIRED)  /CRITERIA=CI(.9500)  /MISSING=ANALYSIS. |
| Resources | Processor Time | 00:00:00,00 |
| Elapsed Time | 00:00:00,00 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Paired Samples Statistics** | | | | | |
|  | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Pretest | 62.73 | 30 | 17.180 | 3.137 |
| Postest | 88.23 | 30 | 7.912 | 1.445 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Paired Samples Correlations** | | | | |
|  | | N | Correlation | Sig. |
| Pair 1 | Pretest & Postest | 30 | .232 | .218 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paired Samples Test** | | | | | | | | | |
|  | | Paired Differences | | | | |  |  |  |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |  |  |  |
| Lower | Upper |  |  |  |
| Pair 1 | Pretest - Postest | -25.500 | 17.168 | 3.134 | -31.911 | -19.089 |  |  |  |