

```
43 0 M>
HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\SPSS" mkdir "D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\SPSS"'].
44 0 M> HOST COMMAND=['cmd /c if not exist "D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\SPSS" mkdir "D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\SPSS"'].
```

Host

```
45 0 M>
GET DATA
46 0 M> GET DATA
/TYPE=TXT
47 0 M> /TYPE=TXT
/FILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\spss_ready_data.csv"
48 0 M> /FILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence Interval\spss_ready_data.csv"
/ENCODING='UTF8'
49 0 M> /ENCODING='UTF8'
/DELCASE=LINE
50 0 M> /DELCASE=LINE
/DELIMITERS=","
51 0 M> /DELIMITERS=","
/QUALIFIER='"'
52 0 M> /QUALIFIER='"'
/ARRANGEMENT=DELIMITED
53 0 M> /ARRANGEMENT=DELIMITED
/FIRSTCASE=2
54 0 M> /FIRSTCASE=2
/VARIABLES=
55 0 M> /VARIABLES=
school A8
56 0 M> school A8
sex A8
57 0 M> sex A8
age F8.0
58 0 M> age F8.0
address A8
```

59 0 M> address A8
famsize A8
60 0 M> famsize A8
Pstatus A8
61 0 M> Pstatus A8
Medu F8.0
62 0 M> Medu F8.0
Fedu F8.0
63 0 M> Fedu F8.0
Mjob A24
64 0 M> Mjob A24
Fjob A24
65 0 M> Fjob A24
reason A24
66 0 M> reason A24
guardian A24
67 0 M> guardian A24
traveltime F8.0
68 0 M> traveltime F8.0
studytime F8.0
69 0 M> studytime F8.0
failures F8.0
70 0 M> failures F8.0
schoolsup A8
71 0 M> schoolsup A8
famsup A8
72 0 M> famsup A8
paid A8
73 0 M> paid A8
activities A8
74 0 M> activities A8
nursery A8
75 0 M> nursery A8
higher A8
76 0 M> higher A8
internet A8
77 0 M> internet A8
romantic A8
78 0 M> romantic A8
famrel F8.0
79 0 M> famrel F8.0
freetime F8.0

```

80  0 M>      freetime F8.0
      goout F8.0
81  0 M>      goout F8.0
      Dalc F8.0
82  0 M>      Dalc F8.0
      Walc F8.0
83  0 M>      Walc F8.0
      health F8.0
84  0 M>      health F8.0
      absences F8.0
85  0 M>      absences F8.0
      G1 F8.0
86  0 M>      G1 F8.0
      G2 F8.0
87  0 M>      G2 F8.0
      G3 F8.0.
88  0 M>      G3 F8.0.
CACHE.
89  0 M>  CACHE.
EXECUTE.
90  0 M>  EXECUTE.

91  0 M>
DATASET NAME ConfidenceIntervalClean WINDOW=FRONT.
92  0 M>  DATASET NAME ConfidenceIntervalClean WINDOW=FRONT.

93  0 M>
VARIABLE LABELS
94  0 M>  VARIABLE LABELS
      school "School"
95  0 M>      school "School"
      sex "Sex"
96  0 M>      sex "Sex"
      age "Age"
97  0 M>      age "Age"
      address "Address type"
98  0 M>      address "Address type"
      famsize "Family size"
99  0 M>      famsize "Family size"
      Pstatus "Parent cohabitation status"
100 0 M>      Pstatus "Parent cohabitation status"
      Medu "Mother education"

```

101 0 M> Medu "Mother education"
Fedu "Father education"
102 0 M> Fedu "Father education"
Mjob "Mother job"
103 0 M> Mjob "Mother job"
Fjob "Father job"
104 0 M> Fjob "Father job"
reason "Reason for choosing school"
105 0 M> reason "Reason for choosing school"
guardian "Guardian"
106 0 M> guardian "Guardian"
traveltime "Travel time"
107 0 M> traveltime "Travel time"
studytime "Weekly study time"
108 0 M> studytime "Weekly study time"
failures "Past class failures"
109 0 M> failures "Past class failures"
schoolsup "Extra educational support"
110 0 M> schoolsup "Extra educational support"
famsup "Family educational support"
111 0 M> famsup "Family educational support"
paid "Paid classes"
112 0 M> paid "Paid classes"
activities "Extra-curricular activities"
113 0 M> activities "Extra-curricular activities"
nursery "Attended nursery school"
114 0 M> nursery "Attended nursery school"
higher "Wants higher education"
115 0 M> higher "Wants higher education"
internet "Internet access at home"
116 0 M> internet "Internet access at home"
romantic "Romantic relationship"
117 0 M> romantic "Romantic relationship"
famrel "Family relationship quality"
118 0 M> famrel "Family relationship quality"
freetime "Free time after school"
119 0 M> freetime "Free time after school"
goout "Going out with friends"
120 0 M> goout "Going out with friends"
Dalc "Workday alcohol consumption"
121 0 M> Dalc "Workday alcohol consumption"
Walc "Weekend alcohol consumption"

```

122 0 M> Walc "Weekend alcohol consumption"
      health "Current health status"
123 0 M> health "Current health status"
      absences "School absences"
124 0 M> absences "School absences"
      G1 "First period grade"
125 0 M> G1 "First period grade"
      G2 "Second period grade"
126 0 M> G2 "Second period grade"
      G3 "Final grade".
127 0 M> G3 "Final grade".

128 0 M>
VARIABLE LEVEL
129 0 M> VARIABLE LEVEL
      school sex address famsize Pstatus Mjob Fjob reason guardian schoolsup famsu
p paid activities nursery higher internet romantic (NOMINAL).
130 0 M> school sex address famsize Pstatus Mjob Fjob reason guardian sch
oolsup famsup paid activities nursery higher internet
      romantic (NOMINAL).

131 0 M>
VARIABLE LEVEL
132 0 M> VARIABLE LEVEL
      age Medu Fedu traveltime studytime failures famrel freetime goout Dalc Walc
health absences G1 G2 G3 (SCALE).
133 0 M> age Medu Fedu traveltime studytime failures famrel freetime goou
t Dalc Walc health absences G1 G2 G3 (SCALE).

134 0 M>
VALUE LABELS studytime
135 0 M> VALUE LABELS studytime
      1 "1: <2 hours"
136 0 M> 1 "1: <2 hours"
      2 "2: 2-5 hours"
137 0 M> 2 "2: 2-5 hours"
      3 "3: 5-10 hours"
138 0 M> 3 "3: 5-10 hours"
      4 "4: >10 hours".
139 0 M> 4 "4: >10 hours".

140 0 M>

```

```

VALUE LABELS failures
141 0 M> VALUE LABELS failures
    0 "0 failures"
142 0 M>    0 "0 failures"
    1 "1 failure"
143 0 M>    1 "1 failure"
    2 "2 failures"
144 0 M>    2 "2 failures"
    3 "3 failures".
145 0 M>    3 "3 failures".

146 0 M>
FORMATS age Medu Fedu traveltime studytime failures famrel freetime goout Dalc
Walc health absences G1 G2 G3 (F8.2).
147 0 M> FORMATS age Medu Fedu traveltime studytime failures famrel freetim
e goout Dalc Walc health absences G1 G2 G3 (F8.2).
EXECUTE.
148 0 M> EXECUTE.

149 0 M>
TITLE "Confidence Interval Import Check: Existing spss_ready_data.csv".
150 0 M> TITLE "Confidence Interval Import Check: Existing spss_ready_data.
csv".

>Warning # 2003. Command name: TITLE
>The title given exceeds 60 characters in length. The first 60 characters wil
l
>be used.

```

Confidence Interval Import Check: Existing spss_ready_data.c

```
DATASET ACTIVATE ConfidenceIntervalClean.
151 0 M> DATASET ACTIVATE ConfidenceIntervalClean.

152 0 M>
DISPLAY DICTIONARY.
153 0 M> DISPLAY DICTIONARY.
```

File Information

[ConfidenceIntervalClean]

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
school	1	School	Nominal	Input	8	Left
sex	2	Sex	Nominal	Input	8	Left
age	3	Age	Scale	Input	8	Right
address	4	Address type	Nominal	Input	8	Left
famsize	5	Family size	Nominal	Input	8	Left
Pstatus	6	Parent cohabitation status	Nominal	Input	8	Left
Medu	7	Mother education	Scale	Input	8	Right
Fedu	8	Father education	Scale	Input	8	Right
Mjob	9	Mother job	Nominal	Input	24	Left
Fjob	10	Father job	Nominal	Input	24	Left
reason	11	Reason for choosing school	Nominal	Input	24	Left
guardian	12	Guardian	Nominal	Input	24	Left
traveltime	13	Travel time	Scale	Input	8	Right
studytime	14	Weekly study time	Scale	Input	8	Right
failures	15	Past class failures	Scale	Input	8	Right

Variable Information

Variable	Print Format	Write Format
school	A8	A8
sex	A8	A8
age	F8.2	F8.2
address	A8	A8
famsize	A8	A8
Pstatus	A8	A8
Medu	F8.2	F8.2
Fedu	F8.2	F8.2
Mjob	A24	A24
Fjob	A24	A24
reason	A24	A24
guardian	A24	A24
traveltime	F8.2	F8.2
studytime	F8.2	F8.2
failures	F8.2	F8.2

Confidence Interval Import Check: Existing spss_ready_data.c

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
schoolsup	16	Extra educational support	Nominal	Input	8	Left
famsup	17	Family educational support	Nominal	Input	8	Left
paid	18	Paid classes	Nominal	Input	8	Left
activities	19	Extra-curricular activities	Nominal	Input	8	Left
nursery	20	Attended nursery school	Nominal	Input	8	Left
higher	21	Wants higher education	Nominal	Input	8	Left
internet	22	Internet access at home	Nominal	Input	8	Left
romantic	23	Romantic relationship	Nominal	Input	8	Left
famrel	24	Family relationship quality	Scale	Input	8	Right
freetime	25	Free time after school	Scale	Input	8	Right
goout	26	Going out with friends	Scale	Input	8	Right
Dalc	27	Workday alcohol consumption	Scale	Input	8	Right
Walc	28	Weekend alcohol consumption	Scale	Input	8	Right
health	29	Current health status	Scale	Input	8	Right
absences	30	School absences	Scale	Input	8	Right

Variable Information

Variable	Print Format	Write Format
schoolsup	A8	A8
famsup	A8	A8
paid	A8	A8
activities	A8	A8
nursery	A8	A8
higher	A8	A8
internet	A8	A8
romantic	A8	A8
famrel	F8.2	F8.2
freetime	F8.2	F8.2
goout	F8.2	F8.2
Dalc	F8.2	F8.2
Walc	F8.2	F8.2
health	F8.2	F8.2
absences	F8.2	F8.2

Confidence Interval Import Check: Existing spss_ready_data.c

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
G1	31	First period grade	Scale	Input	8	Right
G2	32	Second period grade	Scale	Input	8	Right
G3	33	Final grade	Scale	Input	8	Right

Variable Information

Variable	Print Format	Write Format
G1	F8.2	F8.2
G2	F8.2	F8.2
G3	F8.2	F8.2

Variables in the working file

Variable Values

Value	Label
studytime	1.00 1: <2 hours
	2.00 2: 2-5 hours
	3.00 3: 5-10 hours
	4.00 4: >10 hours
failures	.00 0 failures
	1.00 1 failure
	2.00 2 failures
	3.00 3 failures

```

154 0 M>
DESCRIPTIVES VARIABLES=G1 G2 G3 absences age studytime failures
155 0 M> DESCRIPTIVES VARIABLES=G1 G2 G3 absences age studytime failures
/STATISTICS=MEAN STDDEV MIN MAX.
156 0 M> /STATISTICS=MEAN STDDEV MIN MAX.
    
```

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
G1	649	.00	19.00	11.3991	2.74527
G2	649	.00	19.00	11.5701	2.91364
G3	649	.00	19.00	11.9060	3.23066
absences	649	.00	32.00	3.6595	4.64076
age	649	15.00	22.00	16.7442	1.21814
studytime	649	1.00	4.00	1.9307	.82951
failures	649	.00	3.00	.2219	.59324
Valid N (listwise)	649				

157 0 M>

TITLE "Confidence Interval for Main Numeric Variables: 95 Percent CI of the Mean".

158 0 M> TITLE "Confidence Interval for Main Numeric Variables: 95 Percent CI of the Mean".

>Warning # 2003. Command name: TITLE

>The title given exceeds 60 characters in length. The first 60 characters will

>be used.

Confidence Interval for Main Numeric Variables: 95 Percent C

```

EXAMINE VARIABLES=G1 G2 G3 absences age studytime failures
159 0 M> EXAMINE VARIABLES=G1 G2 G3 absences age studytime failures
      /PLOT NONE
160 0 M>      /PLOT NONE
      /STATISTICS DESCRIPTIVES
161 0 M>      /STATISTICS DESCRIPTIVES
      /CINTERVAL 95
162 0 M>      /CINTERVAL 95
      /MISSING LISTWISE
163 0 M>      /MISSING LISTWISE
      /NOTOTAL.
164 0 M>      /NOTOTAL.
  
```

Explore

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
G1	649	100.0%	0	0.0%	649	100.0%
G2	649	100.0%	0	0.0%	649	100.0%
G3	649	100.0%	0	0.0%	649	100.0%
absences	649	100.0%	0	0.0%	649	100.0%
age	649	100.0%	0	0.0%	649	100.0%
studytime	649	100.0%	0	0.0%	649	100.0%
failures	649	100.0%	0	0.0%	649	100.0%

Confidence Interval for Main Numeric Variables: 95 Percent C

Descriptives

		Statistic	Std. Error	
G1	Mean	11.3991	.10776	
	95% Confidence Interval for Mean	Lower Bound	11.1875	
		Upper Bound	11.6107	
	5% Trimmed Mean	11.3861		
	Median	11.0000		
	Variance	7.536		
	Std. Deviation	2.74527		
	Minimum	.00		
	Maximum	19.00		
	Range	19.00		
	Interquartile Range	3.00		
	Skewness	-.003	.096	
	Kurtosis	.037	.192	
G2	Mean	11.5701	.11437	
	95% Confidence Interval for Mean	Lower Bound	11.3455	
		Upper Bound	11.7947	
	5% Trimmed Mean	11.6011		
	Median	11.0000		
	Variance	8.489		
	Std. Deviation	2.91364		
	Minimum	.00		
	Maximum	19.00		
	Range	19.00		
	Interquartile Range	3.00		
	Skewness	-.360	.096	
	Kurtosis	1.662	.192	
G3	Mean	11.9060	.12681	
	95% Confidence Interval for Mean	Lower Bound	11.6570	
		Upper Bound	12.1550	
	5% Trimmed Mean	12.0574		
	Median	12.0000		
	Variance	10.437		
	Std. Deviation	3.23066		

Confidence Interval for Main Numeric Variables: 95 Percent C

Descriptives

		Statistic	Std. Error	
	Minimum	.00		
	Maximum	19.00		
	Range	19.00		
	Interquartile Range	4.00		
	Skewness	-.913	.096	
	Kurtosis	2.712	.192	
	absences	Mean	3.6595	.18217
95% Confidence Interval for Mean		Lower Bound	3.3018	
		Upper Bound	4.0172	
5% Trimmed Mean		3.0861		
Median		2.0000		
Variance		21.537		
Std. Deviation		4.64076		
Minimum		.00		
Maximum		32.00		
Range		32.00		
Interquartile Range		6.00		
Skewness		2.021	.096	
Kurtosis		5.781	.192	
age		Mean	16.7442	.04782
	95% Confidence Interval for Mean	Lower Bound	16.6503	
		Upper Bound	16.8381	
	5% Trimmed Mean	16.6935		
	Median	17.0000		
	Variance	1.484		
	Std. Deviation	1.21814		
	Minimum	15.00		
	Maximum	22.00		
	Range	7.00		
	Interquartile Range	2.00		
	Skewness	.417	.096	
	Kurtosis	.072	.192	
	studytime	Mean	1.9307	.03256

Confidence Interval for Main Numeric Variables: 95 Percent C

Descriptives

		Statistic	Std. Error
	95% Confidence Interval for Mean	Lower Bound	1.8667
		Upper Bound	1.9946
	5% Trimmed Mean	1.8674	
	Median	2.0000	
	Variance	.688	
	Std. Deviation	.82951	
	Minimum	1.00	
	Maximum	4.00	
	Range	3.00	
	Interquartile Range	1.00	
	Skewness	.700	.096
	Kurtosis	.038	.192
	failures	Mean	.2219
95% Confidence Interval for Mean		Lower Bound	.1762
		Upper Bound	.2676
5% Trimmed Mean		.1156	
Median		.0000	
Variance		.352	
Std. Deviation		.59324	
Minimum		.00	
Maximum		3.00	
Range		3.00	
Interquartile Range		.00	
Skewness		3.093	.096
Kurtosis		9.824	.192

165 0 M>

TITLE "One-Sample T Confidence Intervals for G1, G2, G3 and Absences - 95 Percent".

166 0 M> TITLE "One-Sample T Confidence Intervals for G1, G2, G3 and Absences - 95 Percent".

>Warning # 2003. Command name: TITLE

Confidence Interval for Main Numeric Variables: 95 Percent C

>The title given exceeds 60 characters in length. The first 60 characters will
1
>be used.

One-Sample T Confidence Intervals for G1, G2, G3 and Absence

T-TEST

```

167  0 M>  T-TEST
      /TESTVAL=0
168  0 M>    /TESTVAL=0
      /MISSING=ANALYSIS
169  0 M>    /MISSING=ANALYSIS
      /VARIABLES=G1 G2 G3 absences
170  0 M>    /VARIABLES=G1 G2 G3 absences
      /CRITERIA=CI(.95).
171  0 M>    /CRITERIA=CI(.95).
    
```

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
G1	649	11.3991	2.74527	.10776
G2	649	11.5701	2.91364	.11437
G3	649	11.9060	3.23066	.12681
absences	649	3.6595	4.64076	.18217

One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
G1	105.781	648	.000	11.39908	11.1875	11.6107
G2	101.164	648	.000	11.57011	11.3455	11.7947
G3	93.885	648	.000	11.90601	11.6570	12.1550
absences	20.089	648	.000	3.65948	3.3018	4.0172

```
172  0 M>
```

```
TITLE "G3 Confidence Interval at 90 Percent".
```

```
173  0 M>  TITLE "G3 Confidence Interval at 90 Percent".
```

G3 Confidence Interval at 90 Percent

T-TEST

```

174  0 M>  T-TEST
      /TESTVAL=0
175  0 M>    /TESTVAL=0
      /MISSING=ANALYSIS
176  0 M>    /MISSING=ANALYSIS
      /VARIABLES=G3
177  0 M>    /VARIABLES=G3
      /CRITERIA=CI(.90).
178  0 M>    /CRITERIA=CI(.90).
  
```

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
G3	649	11.9060	3.23066	.12681

One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	90% Confidence Interval of the Difference	
					Lower	Upper
G3	93.885	648	.000	11.90601	11.6971	12.1149

```

179  0 M>
TITLE "G3 Confidence Interval at 95 Percent".
180  0 M>  TITLE "G3 Confidence Interval at 95 Percent".
  
```

G3 Confidence Interval at 95 Percent

T-TEST

```

181  0 M>  T-TEST
      /TESTVAL=0
182  0 M>    /TESTVAL=0
      /MISSING=ANALYSIS
183  0 M>    /MISSING=ANALYSIS
      /VARIABLES=G3
184  0 M>    /VARIABLES=G3
      /CRITERIA=CI(.95).
185  0 M>    /CRITERIA=CI(.95).
  
```

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
G3	649	11.9060	3.23066	.12681

One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
G3	93.885	648	.000	11.90601	11.6570	12.1550

```

186  0 M>
TITLE "G3 Confidence Interval at 99 Percent".
187  0 M>  TITLE "G3 Confidence Interval at 99 Percent".
  
```

G3 Confidence Interval at 99 Percent

T-TEST

```

188 0 M> T-TEST
      /TESTVAL=0
189 0 M>      /TESTVAL=0
      /MISSING=ANALYSIS
190 0 M>      /MISSING=ANALYSIS
      /VARIABLES=G3
191 0 M>      /VARIABLES=G3
      /CRITERIA=CI(.99).
192 0 M>      /CRITERIA=CI(.99).
  
```

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
G3	649	11.9060	3.23066	.12681

One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
					Lower	Upper
G3	93.885	648	.000	11.90601	11.5784	12.2336

```
193 0 M>
```

* Convert string grouping variables to numeric coded factors for robust ONEWAY CI tables.

```
194 0 M> * Convert string grouping variables to numeric coded factors for r
obust ONEWAY CI tables.
```

```
AUTORECODE VARIABLES=school sex
```

```
195 0 M> AUTORECODE VARIABLES=school sex
```

```
      /INTO school_code sex_code
```

```
196 0 M>      /INTO school_code sex_code
```

```
      /PRINT.
```

```
197 0 M>      /PRINT.
```

school into school_code (School)

G3 Confidence Interval at 99 Percent

Old Value	New Value	Value	Label
-----------	-----------	-------	-------

GP		1	GP
MS		2	MS

sex into sex_code (Sex)

Old Value	New Value	Value	Label
-----------	-----------	-------	-------

F		1	F
M		2	M

VARIABLE LABELS school_code "School numeric code" sex_code "Sex numeric code".

198 0 M> VARIABLE LABELS school_code "School numeric code" sex_code "Sex numeric code".

VARIABLE LEVEL school_code sex_code (NOMINAL).

199 0 M> VARIABLE LEVEL school_code sex_code (NOMINAL).

EXECUTE.

200 0 M> EXECUTE.

201 0 M>

TITLE "95 Percent Confidence Interval for G3 Mean by School".

202 0 M> TITLE "95 Percent Confidence Interval for G3 Mean by School".

95 Percent Confidence Interval for G3 Mean by School

```

ONEWAY G3 BY school_code
203 0 M> ONEWAY G3 BY school_code
      /STATISTICS DESCRIPTIVES
204 0 M>      /STATISTICS DESCRIPTIVES
      /MISSING ANALYSIS.
205 0 M>      /MISSING ANALYSIS.
    
```

Oneway

Descriptives

G3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
1	423	12.5768	2.62564	.12766	12.3259	12.8278	.00
2	226	10.6504	3.83399	.25503	10.1479	11.1530	.00
Total	649	11.9060	3.23066	.12681	11.6570	12.1550	.00

Descriptives

G3

	Maximum
1	19.00
2	19.00
Total	19.00

ANOVA

G3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	546.629	1	546.629	56.891	.000
Within Groups	6216.638	647	9.608		
Total	6763.267	648			

```

206 0 M>
TITLE "95 Percent Confidence Interval for G3 Mean by Sex".
207 0 M> TITLE "95 Percent Confidence Interval for G3 Mean by Sex".
    
```

95 Percent Confidence Interval for G3 Mean by Sex

```
ONEWAY G3 BY sex_code
208 0 M> ONEWAY G3 BY sex_code
      /STATISTICS DESCRIPTIVES
209 0 M>      /STATISTICS DESCRIPTIVES
      /MISSING ANALYSIS.
210 0 M>      /MISSING ANALYSIS.
```

Oneway

Descriptives

G3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
1	383	12.2533	3.12415	.15964	11.9394	12.5671	.00
2	266	11.4060	3.32069	.20360	11.0051	11.8069	.00
Total	649	11.9060	3.23066	.12681	11.6570	12.1550	.00

Descriptives

G3

	Maximum
1	19.00
2	19.00
Total	19.00

ANOVA

G3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	112.683	1	112.683	10.962	.001
Within Groups	6650.584	647	10.279		
Total	6763.267	648			

```
211 0 M>
TITLE "95 Percent Confidence Interval for G3 Mean by Study Time".
212 0 M> TITLE "95 Percent Confidence Interval for G3 Mean by Study Time".
```

95 Percent Confidence Interval for G3 Mean by Study Time

```

ONEWAY G3 BY studytime
213 0 M> ONEWAY G3 BY studytime
      /STATISTICS DESCRIPTIVES
214 0 M>      /STATISTICS DESCRIPTIVES
      /MISSING ANALYSIS.
215 0 M>      /MISSING ANALYSIS.
    
```

Oneway

Descriptives

G3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
1.00	212	10.8443	3.21862	.22106	10.4086	11.2801	.00
2.00	305	12.0918	3.24313	.18570	11.7264	12.4572	.00
3.00	97	13.2268	2.50210	.25405	12.7225	13.7311	8.00
4.00	35	13.0571	3.03841	.51358	12.0134	14.1009	6.00
Total	649	11.9060	3.23066	.12681	11.6570	12.1550	.00

Descriptives

G3

	Maximum
1.00	18.00
2.00	19.00
3.00	18.00
4.00	19.00
Total	19.00

ANOVA

G3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	465.078	3	155.026	15.876	.000
Within Groups	6298.189	645	9.765		
Total	6763.267	648			

95 Percent Confidence Interval for G3 Mean by Study Time

```
216 0 M>  
TITLE "95 Percent Confidence Interval for G3 Mean by Past Failures".  
217 0 M> TITLE "95 Percent Confidence Interval for G3 Mean by Past Failures  
".
```

95 Percent Confidence Interval for G3 Mean by Past Failures

ONEWAY G3 BY failures

218 0 M> ONEWAY G3 BY failures

/STATISTICS DESCRIPTIVES

219 0 M> /STATISTICS DESCRIPTIVES

/MISSING ANALYSIS.

220 0 M> /MISSING ANALYSIS.

Oneway

Descriptives

G3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
.00	549	12.5100	2.82881	.12073	12.2729	12.7472	.00
1.00	70	8.6429	3.44327	.41155	7.8218	9.4639	.00
2.00	16	8.8125	3.20871	.80218	7.1027	10.5223	.00
3.00	14	8.0714	2.78635	.74468	6.4626	9.6802	.00
Total	649	11.9060	3.23066	.12681	11.6570	12.1550	.00

Descriptives

G3

	Maximum
.00	19.00
1.00	16.00
2.00	15.00
3.00	11.00
Total	19.00

ANOVA

G3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1304.634	3	434.878	51.386	.000
Within Groups	5458.632	645	8.463		
Total	6763.267	648			

95 Percent Confidence Interval for G3 Mean by Past Failures

```
221 0 M>  
TITLE "95 Percent Confidence Interval for Absences Mean by School".  
222 0 M> TITLE "95 Percent Confidence Interval for Absences Mean by School"  
.
```

95 Percent Confidence Interval for Absences Mean by School

```

ONEWAY absences BY school_code
223 0 M> ONEWAY absences BY school_code
      /STATISTICS DESCRIPTIVES
224 0 M>      /STATISTICS DESCRIPTIVES
      /MISSING ANALYSIS.
225 0 M>      /MISSING ANALYSIS.
    
```

Oneway

Descriptives

absences

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
1	423	4.2151	5.19191	.25244	3.7189	4.7113	.00
2	226	2.6195	3.13069	.20825	2.2091	3.0298	.00
Total	649	3.6595	4.64076	.18217	3.3018	4.0172	.00

Descriptives

absences

	Maximum
1	32.00
2	12.00
Total	32.00

ANOVA

absences

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	375.047	1	375.047	17.868	.000
Within Groups	13580.698	647	20.990		
Total	13955.744	648			

```

226 0 M>
TITLE "Frequency Tables for Confidence Interval Context".
227 0 M> TITLE "Frequency Tables for Confidence Interval Context".
    
```

Frequency Tables for Confidence Interval Context

```

FREQUENCIES VARIABLES=school sex studytime failures higher internet
  228  0 M>  FREQUENCIES VARIABLES=school sex studytime failures higher interne
t
  /ORDER=ANALYSIS.
  229  0 M>  /ORDER=ANALYSIS.
  
```

Frequencies

Statistics

		school	sex	studytime	failures	higher	internet
N	Valid	649	649	649	649	649	649
	Missing	0	0	0	0	0	0

Frequency Table

school

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GP	423	65.2	65.2	65.2
	MS	226	34.8	34.8	100.0
	Total	649	100.0	100.0	

sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	383	59.0	59.0	59.0
	M	266	41.0	41.0	100.0
	Total	649	100.0	100.0	

studytime

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	212	32.7	32.7	32.7
	2.00	305	47.0	47.0	79.7
	3.00	97	14.9	14.9	94.6
	4.00	35	5.4	5.4	100.0
	Total	649	100.0	100.0	

Frequency Tables for Confidence Interval Context

failures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	549	84.6	84.6	84.6
	1.00	70	10.8	10.8	95.4
	2.00	16	2.5	2.5	97.8
	3.00	14	2.2	2.2	100.0
	Total	649	100.0	100.0	

higher

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	69	10.6	10.6	10.6
	yes	580	89.4	89.4	100.0
	Total	649	100.0	100.0	

internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	151	23.3	23.3	23.3
	yes	498	76.7	76.7	100.0
	Total	649	100.0	100.0	

```

230  0 M>
TITLE "Confidence Interval Notes".
231  0 M> TITLE "Confidence Interval Notes".
    
```

Confidence Interval Notes

```
REPORT FORMAT=LIST AUTOMATIC ALIGN(CENTER)
232 0 M> REPORT FORMAT=LIST AUTOMATIC ALIGN(CENTER)
      /TITLE "Confidence Interval Interpretation Notes"
233 0 M>      /TITLE "Confidence Interval Interpretation Notes"
      /VARIABLES=G3
234 0 M>      /VARIABLES=G3
      /MISSING=LISTWISE
235 0 M>      /MISSING=LISTWISE
      /SUMMARY=MEAN STDDEV N.
236 0 M>      /SUMMARY=MEAN STDDEV N.
```

Report

```
>Error # 14875. Command name: REPORT
>A REPORT subcommand is used out of sequence. A SUMMARY subcommand must follow
>a BREAK or another SUMMARY, and after the first BREAK, there can be no
>interruption of the BREAK/SUMMARY subcommand sequence.
>Execution of this command stops.
```

```
237 0 M>
SAVE OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence
Interval\SPSS\confidence_interval_spss_output_data.sav"
238 0 M> SAVE OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence
Interval\SPSS\confidence_interval_spss_output_data.sav"
      /COMPRESSED.
239 0 M>      /COMPRESSED.
```

```
240 0 M>
OUTPUT SAVE OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics Guides\Confidence
Interval\SPSS\Confidence-Interval-SPSS-output.spv".
241 0 M> OUTPUT SAVE OUTFILE="D:\DATA ANALYSIS\A Basic Descriptive Statistics
Guides\Confidence Interval\SPSS\Confidence-Interval
      -SPSS-output.spv".
```

```
242 0 M>
OUTPUT EXPORT
243 0 M> OUTPUT EXPORT
      /CONTENTS EXPORT=VISIBLE
```

Confidence Interval Notes

244 0 M> /CONTENTS EXPORT=VISIBLE