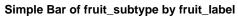
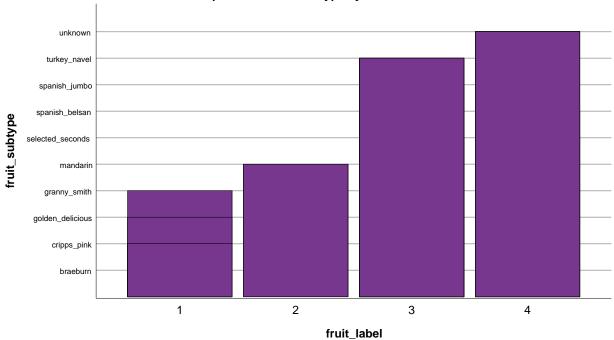
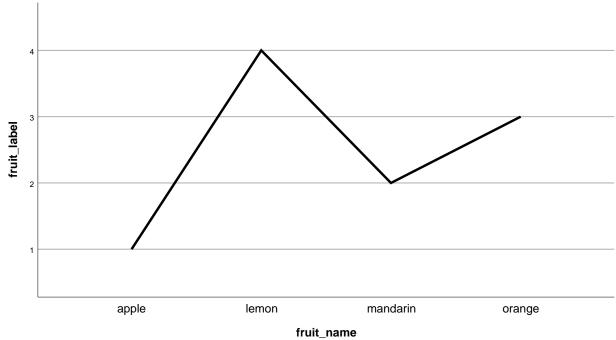
## **GGraph**



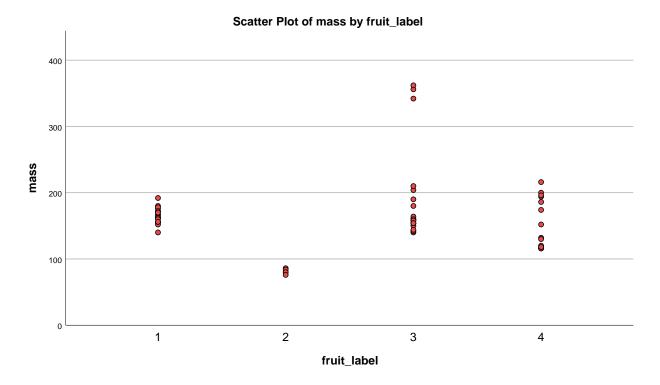


## **GGraph**

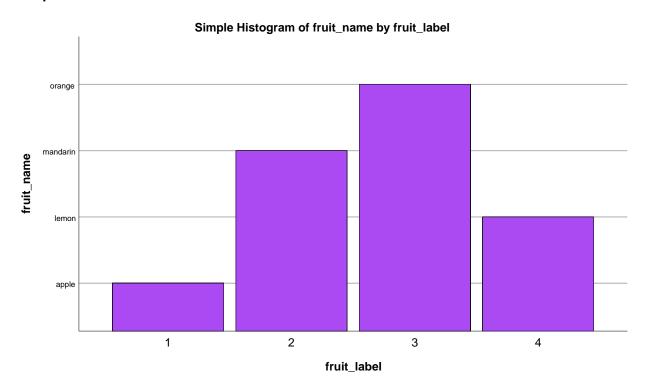




### **GGraph**

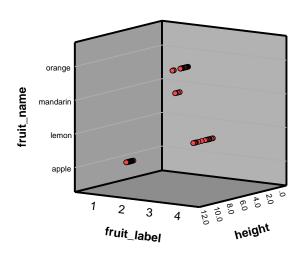


# **GGraph**

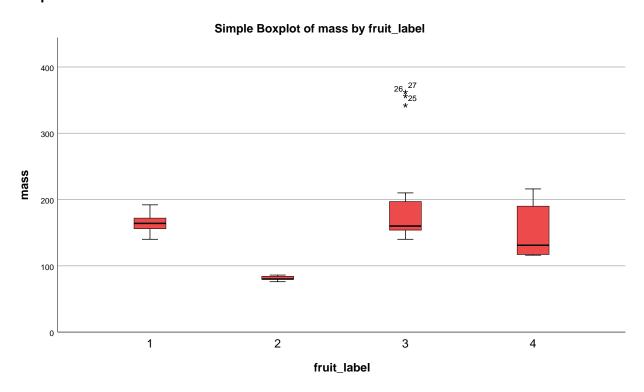


# **GGraph**

Simple 3-D Scatter of fruit\_name by fruit\_label by height

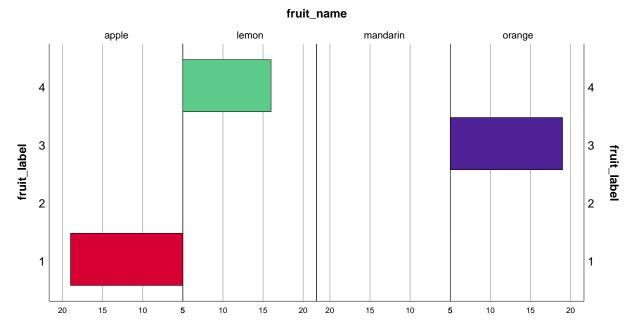


## **GGraph**

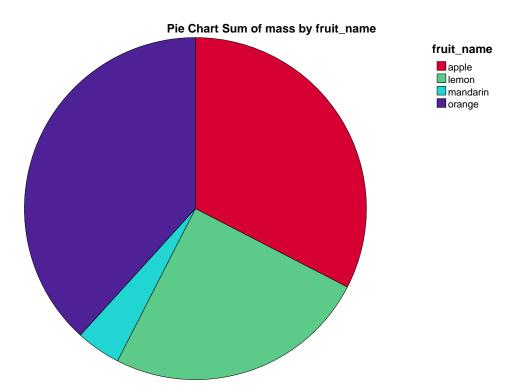


**GGraph** 

## Population Pyramid Count fruit\_label by fruit\_name



## **GGraph**



**Correlations** 

#### Correlations

		fruit_label	mass
fruit_label	Pearson Correlation	1	.033
	Sig. (2-tailed)		.806
	N	59	59
mass	Pearson Correlation	.033	1
	Sig. (2-tailed)	.806	
	N	59	59

## **Descriptives**

## **Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
fruit_label	59	1	4	2.54	1.208
mass	59	76	362	163.12	55.019
width	59	5.8	9.6	7.105	.8169
height	59	4.0	10.5	7.693	1.3610
color_score	59	.55	.93	.7629	.07686
Valid N (listwise)	59				

## Frequencies

#### **Statistics**

		fruit_label	fruit_name	fruit_subtype	mass	width	height	color_score
N	Valid	59	59	59	59	59	59	59
	Missing	0	0	0	0	0	0	0

## **Frequency Table**

### fruit\_label

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	32.2	32.2	32.2
	2	5	8.5	8.5	40.7
	3	19	32.2	32.2	72.9
	4	16	27.1	27.1	100.0
	Total	59	100.0	100.0	

## fruit\_name

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	apple	19	32.2	32.2	32.2
	lemon	16	27.1	27.1	59.3
	mandarin	5	8.5	8.5	67.8
	orange	19	32.2	32.2	100.0
	Total	59	100.0	100.0	

## fruit\_subtype

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	braeburn	5	8.5	8.5	8.5
	cripps_pink	6	10.2	10.2	18.6
	golden_delicious	5	8.5	8.5	27.1
	_granny_smith	3	5.1	5.1	32.2
	mandarin	5	8.5	8.5	40.7
	selected_seconds	6	10.2	10.2	50.8
	spanish_belsan	6	10.2	10.2	61.0
	spanish_jumbo	3	5.1	5.1	66.1
	turkey_navel	10	16.9	16.9	83.1
	unknown	10	16.9	16.9	100.0
	Total	59	100.0	100.0	

#### mass

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	76	1	1.7	1.7	1.7
	80	2	3.4	3.4	5.1
	84	1	1.7	1.7	6.8
	86	1	1.7	1.7	8.5
	116	4	6.8	6.8	15.3
	118	2	3.4	3.4	18.6
	120	1	1.7	1.7	20.3
	130	1	1.7	1.7	22.0
	132	1	1.7	1.7	23.7
	140	2	3.4	3.4	27.1
	142	1	1.7	1.7	28.8
	144	1	1.7	1.7	30.5
	150	1	1.7	1.7	32.2
	152	2	3.4	3.4	35.6
	154	4	6.8	6.8	42.4
	156	3	5.1	5.1	47.5
	158	2	3.4	3.4	50.8
	160	3	5.1	5.1	55.9
	162	2	3.4	3.4	59.3
	164	2	3.4	3.4	62.7
	166	1	1.7	1.7	64.4
	168	1	1.7	1.7	66.1
	170	1	1.7	1.7	67.8
	172	2	3.4	3.4	71.2
	174	1	1.7	1.7	72.9
	176	1	1.7	1.7	74.6
	178	1	1.7	1.7	76.3
	180	2	3.4	3.4	79.7
	186	1	1.7	1.7	81.4
	190	1	1.7	1.7	83.1
	192	1	1.7	1.7	84.7
	194	1	1.7	1.7	86.4
	196	1	1.7	1.7	88.1
	200	1	1.7	1.7	89.8
	204	1	1.7	1.7	91.5
	210	1	1.7	1.7	93.2
	216	1	1.7	1.7	94.9
	342	1	1.7	1.7	96.6
	356	1	1.7	1.7	98.3

#### mass

	Frequency	Percent	Valid Percent	Cumulative Percent
362	1	1.7	1.7	100.0
Total	59	100.0	100.0	

# width

width						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	5.8	3	5.1	5.1	5.1	
	5.9	3	5.1	5.1	10.2	
	6.0	4	6.8	6.8	16.9	
	6.1	2	3.4	3.4	20.3	
	6.2	1	1.7	1.7	22.0	
	6.3	1	1.7	1.7	23.7	
	6.5	1	1.7	1.7	25.4	
	6.7	1	1.7	1.7	27.1	
	6.8	1	1.7	1.7	28.8	
	6.9	1	1.7	1.7	30.5	
	7.0	2	3.4	3.4	33.9	
	7.1	6	10.2	10.2	44.1	
	7.2	5	8.5	8.5	52.5	
	7.3	7	11.9	11.9	64.4	
	7.4	4	6.8	6.8	71.2	
	7.5	5	8.5	8.5	79.7	
	7.6	5	8.5	8.5	88.1	
	7.7	1	1.7	1.7	89.8	
	7.8	1	1.7	1.7	91.5	
	8.0	1	1.7	1.7	93.2	
	8.4	1	1.7	1.7	94.9	
	9.0	1	1.7	1.7	96.6	
	9.2	1	1.7	1.7	98.3	
	9.6	1	1.7	1.7	100.0	
	Total	59	100.0	100.0		

# height

			neigni		
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.0	1	1.7	1.7	1.7
	4.3	2	3.4	3.4	5.1
	4.6	1	1.7	1.7	6.8
	4.7	1	1.7	1.7	8.5
	6.8	1	1.7	1.7	10.2
	7.0	2	3.4	3.4	13.6
	7.1	5	8.5	8.5	22.0
	7.2	3	5.1	5.1	27.1
	7.3	4	6.8	6.8	33.9
	7.4	3	5.1	5.1	39.0
	7.5	5	8.5	8.5	47.5
	7.6	3	5.1	5.1	52.5
	7.7	2	3.4	3.4	55.9
	7.8	3	5.1	5.1	61.0
	7.9	2	3.4	3.4	64.4
	8.0	2	3.4	3.4	67.8
	8.1	3	5.1	5.1	72.9
	8.2	2	3.4	3.4	76.3
	8.4	1	1.7	1.7	78.0
	8.5	2	3.4	3.4	81.4
	8.7	1	1.7	1.7	83.1
	9.2	4	6.8	6.8	89.8
	9.4	1	1.7	1.7	91.5
	9.7	1	1.7	1.7	93.2
	10.1	1	1.7	1.7	94.9
	10.2	1	1.7	1.7	96.6
	10.3	1	1.7	1.7	98.3
	10.5	1	1.7	1.7	100.0
	Total	59	100.0	100.0	

## color\_score

					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	.55	1	1.7	1.7	1.7
	.59	1	1.7	1.7	3.4
	.60	1	1.7	1.7	5.1
	.67	1	1.7	1.7	6.8
	.69	2	3.4	3.4	10.2
	.70	3	5.1	5.1	15.3
	.71	3	5.1	5.1	20.3
	.72	9	15.3	15.3	35.6
	.73	3	5.1	5.1	40.7
	.74	3	5.1	5.1	45.8
	.75	5	8.5	8.5	54.2
	.76	1	1.7	1.7	55.9
	.77	3	5.1	5.1	61.0
	.78	1	1.7	1.7	62.7
	.79	4	6.8	6.8	69.5
	.80	2	3.4	3.4	72.9
	.81	3	5.1	5.1	78.0
	.82	2	3.4	3.4	81.4
	.83	1	1.7	1.7	83.1
	.84	1	1.7	1.7	84.7
	.85	1	1.7	1.7	86.4
	.86	1	1.7	1.7	88.1
	.87	1	1.7	1.7	89.8
	.88	2	3.4	3.4	93.2
	.89	1	1.7	1.7	94.9
	.92	2	3.4	3.4	98.3
	.93	1	1.7	1.7	100.0
	Total	59	100.0	100.0	

#### T-Test

# **One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
fruit_label	59	2.54	1.208	.157
mass	59	163.12	55.019	7.163
width	59	7.105	.8169	.1064
height	59	7.693	1.3610	.1772
color_score	59	.7629	.07686	.01001

## **One-Sample Test**

Test Value = 0

			Significance			95% Confidence Interval of the
	t	df	One-Sided p	Two-Sided p	Mean Difference	Lower
fruit_label	16.165	58	<.001	<.001	2.542	2.23
mass	22.773	58	<.001	<.001	163.119	148.78
width	66.805	58	<.001	<.001	7.1051	6.892
height	43.418	58	<.001	<.001	7.6932	7.339
color_score	76.242	58	<.001	<.001	.76288	.7429

### **One-Sample Test**

Test Value = 0 95% Confidence Interval of the ...

	Upper		
fruit_label	2.86		
mass	177.46		
width	7.318		
height	8.048		
color_score	.7829		

### **One-Sample Effect Sizes**

				95% Confide	ence Interval
		Standardizer <sup>a</sup>	Point Estimate	Lower	Upper
fruit_label	Cohen's d	1.208	2.105	1.642	2.561
	Hedges' correction	1.224	2.077	1.621	2.528
mass	Cohen's d	55.019	2.965	2.366	3.558
	Hedges' correction	55.743	2.926	2.336	3.511
width	Cohen's d	.8169	8.697	7.096	10.294
	Hedges' correction	.8277	8.584	7.004	10.160
height	Cohen's d	1.3610	5.653	4.593	6.707
	Hedges' correction	1.3789	5.579	4.533	6.620
color_score	Cohen's d	.07686	9.926	8.104	11.743
	Hedges' correction	.07787	9.797	7.999	11.590

a. The denominator used in estimating the effect sizes. Cohen's d uses the sample standard deviation.

Hedges' correction uses the sample standard deviation, plus a correction factor.

## Oneway

#### **ANOVA**

#### Technique

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.750	19	.461	.409	.955
Within Groups	11.250	10	1.125		
Total	20.000	29			

## ANOVA Effect Sizes a,b

			95% Confidence Interval	
		Point Estimate	Lower	Upper
Technique	Eta-squared	.438	.000	.086
	Epsilon-squared	631	-1.900	-1.650
	Omega-squared Fixed-effect	598	-1.727	-1.512
	Omega-squared Random- effect	020	034	033

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

#### T-Test

### **Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	group	.63	24	.495	.101
	mpg	21.88	24	3.069	.626

### **Paired Samples Correlations**

				Significance		
		N	Correlation	One-Sided p	Two-Sided p	
Pair 1 gr	oup & mpg	24	.312	.069	.138	

### **Paired Samples Test**

		Paired Differences				
					95% Confidence Interval of the Difference	
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Pair 1	group - mpg	-21.250	2.953	.603	-22.497	-20.003

b. Negative but less biased estimates are retained, not rounded to zero.

### **Paired Samples Test**

				Significance		
		t	df	One-Sided p	Two-Sided p	
Pair 1	group - mpg	-35.259	23	<.001	<.001	

#### **Paired Samples Effect Sizes**

					95% Confidence Interval	
			Standardizer <sup>a</sup>	Point Estimate	Lower	Upper
Pair 1	group - mpg	Cohen's d	2.953	-7.197	-9.296	-5.089
		Hedges' correction	3.053	-6.960	-8.989	-4.921

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

#### T-Test

[DataSet5]

### **Group Statistics**

	group	N	Mean	Std. Deviation	Std. Error Mean
mpg	0	9	20.67	2.828	.943
	1	15	22.60	3.066	.792

### **Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
	Favol verion and account of	'		4.500	-
mpg	Equal variances assumed	.005	.945	-1.538	22
	Equal variances not assumed			-1.570	18.112

#### **Independent Samples Test**

t-test for Equality of Means

		Signifi	icance		Std. Error	
		One-Sided p	Two-Sided p	Mean Difference	Difference	
mpg	Equal variances assumed	.069	.138	-1.933	1.257	
	Equal variances not assumed	.067	.134	-1.933	1.231	

#### **Independent Samples Test**

t-test for Equality of Means

95% Confidence Interval of the Difference

		Lower	Upper
mpg	Equal variances assumed	-4.541	.674
	Equal variances not assumed	-4.519	.652

#### **Independent Samples Effect Sizes**

				95% Confidence Interval	
		Standardizer <sup>a</sup>	Point Estimate	Lower	Upper
mpg	Cohen's d	2.982	648	-1.489	.207
	Hedges' correction	3.088	626	-1.438	.199
	Glass's delta	3.066	631	-1.478	.238

a. The denominator used in estimating the effect sizes. Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

#### **Crosstabs**

#### **Case Processing Summary**

Cases

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
group * mpg	24	100.0%	0	0.0%	24	100.0%

## group \* mpg Crosstabulation

#### Count

		mpg						
		17	18	19	20	21	22	23
group	0	1	2	0	2	1	0	1
	1	1	1	1	0	2	1	3
Total		2	3	1	2	3	1	4

### group \* mpg Crosstabulation

#### Count

	mpg						
		24	25	27	28	Total	
group	0	1	1	0	0	9	
	1	3	1	1	1	15	
Total		4	2	1	1	24	

## **Chi-Square Tests**

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	7.644 <sup>a</sup>	10	.664
Likelihood Ratio	9.574	10	.479
Linear-by-Linear Association	2.232	1	.135
N of Valid Cases	24		

a. 22 cells (100.0%) have expected count less than 5. The minimum expected count is .38.

## **Symmetric Measures**

		Value	Approximate Significance
Nominal by Nominal	Phi	.564	.664
	Cramer's V	.564	.664
N of Valid Cases		24	