Oneway

[DataSet1]

Descriptives

totalsales

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum
Sunny	4950	3309.4325	2840.15231	40.36817	3230.2930	3388.5720	.00
Cloudy	3045	3262.4846	2827.06514	51.23210	3162.0315	3362.9376	.00
Rainy	2005	3190.7539	2965.04635	66.21773	3060.8911	3320.6167	.00
Total	10000	3271.3418	2861.75272	28.61753	3215.2457	3327.4379	.00

Descriptives

totalsales

	Maximum
Sunny	21693.28
Cloudy	26822.28
Rainy	18471.00
Total	26822.28

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
totalsales	Based on Mean	1.932	2	9997	.145
	Based on Median	1.491	2	9997	.225
	Based on Median and with adjusted df	1.491	2	9983.952	.225
	Based on trimmed mean	1.601	2	9997	.202

ANOVA

totalsales

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20442154.331	2	10221077.165	1.248	.287
Within Groups	81867654704	9997	8189222.237		
Total	81888096859	9999			

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
totalsales	Eta-squared	.000	.000	.001
	Epsilon-squared	.000	.000	.001
	Omega-squared Fixed-effect	.000	.000	.001
	Omega-squared Random-effect	.000	.000	.000

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

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

Robust Tests of Equality of Means

totalsales

	Statistic[a]	df1	df2	Sig.
Welch	1.199	2	4974.832	.301

a. Asymptotically F distributed.

T-Test

Notes

Output Created		24-FEB-2026 14:14:19
Comments		
Input	Data	C: \Users\pc\Desktop\david\St atistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10000
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=has_promotion (0 1) /MISSING=ANALYSIS /VARIABLES=totalsales /ES DISPLAY(TRUE) /HOMOGENEITY DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.05

Group Statistics

	has_promotion	N	Mean	Std. Deviation	Std. Error Mean
totalsales	No promotion	8502	3104.9224	2790.13536	30.25971
	Promotion	1498	4215.8665	3073.05497	79.39889

Independent Samples Test

		t-test for Equality of Means			
				Significance	
		t	df	One-Sided p	Two-Sided p
totalsales	Equal variances assumed	-13.988	9998	<.001	<.001
	Equal variances not assumed	-13.075	1956.177	<.001	<.001

Independent Samples Test

		t-test for Equality of Means		95% Confidence Interval of the ...
		Mean Difference	Std. Error Difference	Lower
totalsales	Equal variances assumed	-1110.94414	79.41977	-1266.62287
	Equal variances not assumed	-1110.94414	84.96960	-1277.58460

Independent Samples Test

		t-test for Equality ..
		95% Confidence Interval of the ...
		Upper
totalsales	Equal variances assumed	-955.26540
	Equal variances not assumed	-944.30367

Homogeneity of Variance Test

		Levene's Test for Equality of Variances	
		F	Sig.
totalsales	Equal variances assumed	27.783	<.001

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
totalsales	Cohen's d	2834.29516	-.392	-.447	-.337
	Hedges' correction	2834.50780	-.392	-.447	-.337
	Glass's delta	3073.05497	-.362	-.418	-.305

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.

Oneway

Notes

Output Created		24-FEB-2026 14:39:45
Comments		
Input	Data	C:\Users\pc\Desktop\david\Statistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10000
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY totalsales BY meal_type_encoded /ES=OVERALL /STATISTICS DESCRIPTIVES HOMOGENEITY WELCH /MISSING ANALYSIS /CRITERIA=CILEVEL (0.95) /POSTHOC=GH ALPHA (0.05).

Notes

Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:00.11

Descriptives

totalsales

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Break Fast	2515	3260.3693	1921.85800	38.32236	3185.2227	3335.5160
Dinner	3999	3007.6739	3028.27683	47.88725	2913.7882	3101.5596
Lunch	3486	3581.7273	3183.75025	53.92316	3476.0031	3687.4514
Total	10000	3271.3418	2861.75272	28.61753	3215.2457	3327.4379

Descriptives

totalsales

	Minimum	Maximum
Break Fast	.00	12843.90
Dinner	.00	26822.28
Lunch	.00	21693.28
Total	.00	26822.28

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
totalsales	Based on Mean	141.573	2	9997	<.001
	Based on Median	68.576	2	9997	<.001
	Based on Median and with adjusted df	68.576	2	8596.988	<.001
	Based on trimmed mean	103.768	2	9997	<.001

ANOVA

totalsales

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	614154573.73	2	307077286.87	37.772	<.001
Within Groups	81273942285	9997	8129833.178		
Total	81888096859	9999			

ANOVA Effect Sizes[a]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
totalsales	Eta-squared	.007	.004	.011
	Epsilon-squared	.007	.004	.011
	Omega-squared Fixed-effect	.007	.004	.011
	Omega-squared Random-effect	.004	.002	.005

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

Robust Tests of Equality of Means

totalsales

	Statistic[a]	df1	df2	Sig.
Welch	31.678	2	6597.025	<.001

a. Asymptotically F distributed.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: totalsales

Games-Howell

(I) meal_type_encoded	(J) meal_type_encoded	Mean Difference (I-J)	Std. Error	Sig.	95% ... Lower Bound
Break Fast	Dinner	252.69545*	61.33345	<.001	108.9153
	Lunch	-321.35793*	66.15369	<.001	-476.4420
Dinner	Break Fast	-252.69545*	61.33345	<.001	-396.4756
	Lunch	-574.05338*	72.11723	<.001	-743.1095
Lunch	Break Fast	321.35793*	66.15369	<.001	166.2738
	Dinner	574.05338*	72.11723	<.001	404.9973

Multiple Comparisons

Dependent Variable: totalsales

Games-Howell

(I) meal_type_encoded	(J) meal_type_encoded	95% ... Upper Bound
Break Fast	Dinner	396.4756
	Lunch	-166.2738
Dinner	Break Fast	-108.9153
	Lunch	-404.9973
Lunch	Break Fast	476.4420
	Dinner	743.1095

*. The mean difference is significant at the 0.05 level.

Means

Notes

Output Created		24-FEB-2026 14:57:42
Comments		
Input	Data	C:\Users\pc\Desktop\david\Statistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	meal_type_encoded = 3 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	3486
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.

Notes

Syntax		MEANS TABLES=totalsales BY menu_item_name /CELLS=MEAN COUNT STDDEV /STATISTICS ANOVA.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
totalsales * menu_item_name	3486	100.0%	0	0.0%	3486	100.0%

Report

totalsales

menu_item_name	Mean	N	Std. Deviation
Beef_Rendang	5063.6872	299	4058.95385
Cendol	1924.2151	618	885.95560
Char_Kway_Teow	3675.7613	206	1982.11073
Chicken_Chop	7332.1651	358	4207.30204
ChickenRice	3712.6305	185	1978.07543
Iced_Lemon_Tea	1993.7164	227	754.12909
Laksa	2765.3338	237	1344.08992
Mushroom_Soup	2173.7096	336	1596.59985
Nasi_Lemak	3373.2390	311	1680.17078
Spaghetti_Carbonara	6658.2013	327	4425.11523
Teh_Tarik	1699.2199	382	657.83021
Total	3581.7273	3486	3183.75025

ANOVA Table

			Sum of Squares	df	Mean Square
totalsales * menu_item_name	Between Groups	(Combined)	13253813328	10	1325381332.8
	Within Groups		22071072571	3475	6351387.790
	Total		35324885899	3485	

ANOVA Table

			F	Sig.
totalsales * menu_item_name	Between Groups	(Combined)	208.676	<.001
	Within Groups			
	Total			

Measures of Association

	Eta	Eta Squared
totalsales * menu_item_name	.613	.375

Means

Notes

Output Created		24-FEB-2026 15:04:16
Comments		
Input	Data	C:\Users\pc\Desktop\david\Statistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	meal_type_encoded = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	2515
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
Syntax		MEANS TABLES=totalsales BY menu_item_name /CELLS=MEAN COUNT STDDEV /STATISTICS ANOVA.

Notes

Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.07

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
totalsales * menu_item_name	2515	100.0%	0	0.0%	2515	100.0%

Report

totalsales

menu_item_name	Mean	N	Std. Deviation
Iced_Lemon_Tea	2381.2248	205	1010.53305
Kaya_Toast_Set	4209.4134	1245	1765.09278
Nasi_Lemak	3959.6910	347	1864.47784
Roti_Canai	1066.1978	340	365.64018
Teh_Tarik	1942.9581	378	748.01005
Total	3260.3693	2515	1921.85800

ANOVA Table

			Sum of Squares	df	Mean Square
totalsales * menu_item_name	Between Groups	(Combined)	3742434939.8	4	935608734.94
	Within Groups		5543120028.1	2510	2208414.354
	Total		9285554967.8	2514	

ANOVA Table

			F	Sig.
totalsales * menu_item_name	Between Groups	(Combined)	423.656	<.001
	Within Groups			
	Total			

Measures of Association

	Eta	Eta Squared
totalsales * menu_item_name	.635	.403

Means

Notes

Output Created		24-FEB-2026 15:06:03
Comments		
Input	Data	C: \Users\pc\Desktop\david\Statistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	meal_type_encoded = 2 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	3999
Missing Value Handling	Definition of Missing	For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing.
	Cases Used	Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values.
Syntax		MEANS TABLES=totalsales BY menu_item_name /CELLS=MEAN COUNT STDDEV /STATISTICS ANOVA.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.00

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
totalsales * menu_item_name	3999	100.0%	0	0.0%	3999	100.0%

Report

totalsales

menu_item_name	Mean	N	Std. Deviation
Beef_Rendang	4297.9517	327	3807.65029
Cendol	1704.9620	601	841.56594
Char_Kway_Teow	2985.1752	170	1813.02872
Chicken_Chop	6380.3520	335	4233.55293
ChickenRice	3255.4263	149	1686.14552
Iced_Lemon_Tea	1878.4391	245	798.13295
Mushroom_Soup	1975.9350	335	1595.26084
Roti_Canai	818.7473	366	316.75601
Spaghetti_Carbonara	6520.7163	358	4515.40605
Tandoori_Chicken	2947.5979	726	2010.66271
Teh_Tarik	1476.5621	387	649.34515
Total	3007.6739	3999	3028.27683

ANOVA Table

			Sum of Squares	df	Mean Square
totalsales * menu_item_name	Between Groups	(Combined)	13134952223	10	1313495222.3
	Within Groups		23528549194	3988	5899836.809
	Total		36663501418	3998	

ANOVA Table

			F	Sig.
totalsales * menu_item_name	Between Groups	(Combined)	222.632	<.001
	Within Groups			
	Total			

Measures of Association

	Eta	Eta Squared
totalsales * menu_item_name	.599	.358

T-Test

Notes

Output Created		24-FEB-2026 15:11:48
Comments		
Input	Data	C: \Users\pc\Desktop\david\Statistics\Sonnet 4.6\Project 1.csv
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10000
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=special_event(0 1) /MISSING=ANALYSIS /VARIABLES=totalsales /ES DISPLAY(TRUE) /HOMOGENEITY DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Group Statistics

	special_event	N	Mean	Std. Deviation	Std. Error Mean
totalsales	No	9493	3214.3202	2810.45419	28.84528
	Yes	507	4339.0074	3530.01937	156.77366

Independent Samples Test

t-test for Equality of Means

		t	df	Significance	
				One-Sided p	Two-Sided p
totalsales	Equal variances assumed	-8.654	9998	<.001	<.001
	Equal variances not assumed	-7.056	540.807	<.001	<.001

Independent Samples Test

t-test for Equality of Means

		Mean Difference	Std. Error Difference	95% Confidence Interval of the ...
				Lower
totalsales	Equal variances assumed	-1124.68727	129.96538	-1379.44558
	Equal variances not assumed	-1124.68727	159.40524	-1437.81659

Independent Samples Test

t-test for Equality ..

		95% Confidence Interval of the ...
		Upper
totalsales	Equal variances assumed	-869.92897
	Equal variances not assumed	-811.55795

Homogeneity of Variance Test

Levene's Test for Equality of Variances

		F	Sig.
totalsales	Equal variances assumed	41.164	<.001

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
totalsales	Cohen's d	2851.23755	-.394	-.484	-.305
	Hedges' correction	2851.45145	-.394	-.484	-.305
	Glass's delta	3530.01937	-.319	-.410	-.227

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.