## Контрольная точка №1. Вариант 7. Молday, 23 March 2020 10:48:58 1 Выполнила Петренко В.Ю. Группа ИС-Б17

#### Наблюдения, которым соответствуют 10 максимальных значений переменной LENGTH

Obs	Make	Model	Туре	Length
1	Chevrolet	Silverado SS	Truck	238
2	GMC	Sierra Extended Cab 1500	Truck	230
3	Ford	Excursion 6.8 XLT	SUV	227
4	Nissan	Titan King Cab XE	Truck	224
5	Chevrolet	Avalanche 1500	Truck	222
6	GMC	Sierra HD 2500	Truck	222
7	Cadillac	Escalade EXT	Truck	221
8	Lincoln	Town Car Ultimate L 4dr	Sedan	221
9	Chevrolet	Suburban 1500 LT	SUV	219
10	Dodge	Dakota Club Cab	Truck	219

## Молдау, 23 March 2020 10:48:58 2 Статистики переменных WEIGHT, LENGTH MPG\_CITY MPG\_HIGHWAY для классифицирующих переменных ORIGIN MAKE с обобщенными статистиками

Obs	Make	Origin	_TYPE_	_FREQ_	MPG_City_Mean	MPG_Highway_Mean	Weight_Mean
1			0	428	20.0607	26.8435	3577.95
2		Asia	1	158	22.0127	28.2658	3319.32
3		Europe	1	123	18.7317	26.0081	3680.72
4		USA	1	147	19.0748	26.0136	3769.95
5	Acura		2	7	19.4286	26.1429	3565.71
6	Audi		2	19	18.4737	25.7895	3700.63
7	BMW		2	20	18.7000	27.0000	3611.35
8	Buick		2	9	18.8889	27.7778	3757.67
9	Cadillac		2	8	16.5000	23.0000	4363.63
10	Chevrolet		2	27	19.6667	26.8519	3640.22
11	Chrysler		2	15	19.8667	27.3333	3534.33
12	Dodge		2	13	19.3846	26.2308	3638.77
13	Ford		2	23	19.2609	25.7391	3748.91
14	GMC		2	8	15.3750	19.6250	4731.38
15	Honda		2	17	27.8235	34.0000	3101.00
16	Hummer		2	1	10.0000	12.0000	6400.00
17	Hyundai		2	12	23.0000	29.9167	2930.00
18	Infiniti		2	8	17.2500	23.8750	3741.00

Obs	Length_Mean	MPG_City_StdDev	MPG_Highway_StdDev	Weight_StdDev	Length_StdDev
1	186.362	5.2382	5.7412	758.98	14.3580
2	182.816	6.7333	6.7705	717.84	12.5641
3	181.846	3.2895	4.1676	579.58	11.4799
4	193.952	3.9830	5.3966	855.31	15.3053
5	185.429	2.6992	3.1320	561.73	9.9809
6	181.421	2.3891	2.9170	364.84	12.3212
7	180.100	1.5927	2.4709	488.36	10.6173
8	197.889	1.6915	2.8186	382.23	6.4507
9	199.750	2.0000	3.7796	815.32	12.8146
10	191.630	4.5573	6.7351	880.11	17.3630
11	190.000	1.9223	1.9881	478.41	15.4827
12	194.231	5.0421	5.2939	709.44	13.8031
13	191.913	4.6144	5.6826	1110.32	18.4660
14	208.500	1.7678	2.3867	857.46	14.4420
15	179.294	11.3261	11.3743	718.67	12.9169
16	190.000				
17	178.583	4.8990	3.7769	525.58	9.2388
18	190.625	1.2817	2.5877	368.90	5.9266

#### Молдау, 23 March 2020 10:48:58 3 Статистики переменных WEIGHT, LENGTH MPG\_CITY MPG\_HIGHWAY для классифицирующих переменных ORIGIN MAKE с обобщенными статистиками

Obs	Make	Origin	_TYPE_	_FREQ_	MPG_City_Mean	MPG_Highway_Mean	Weight_Mean
19	Isuzu		2	2	16.0000	20.5000	4401.50
20	Jaguar		2	12	17.5000	25.5833	3821.75
21	Jeep		2	3	17.3333	21.3333	3730.33
22	Kia		2	11	21.9091	28.8182	3167.91
23	Land Rover		2	3	14.0000	17.6667	4510.67
24	Lexus		2	11	17.4545	23.4545	3909.00
25	Lincoln		2	9	16.7778	23.4444	4323.67
26	MINI		2	2	26.5000	35.5000	2601.00
27	Mazda		2	11	21.4545	27.2727	2980.91
28	Mercedes-Benz		2	26	17.3462	23.6538	3851.92
29	Mercury		2	9	17.5556	24.5556	3908.44
30	Mitsubishi		2	13	20.9231	27.2308	3358.15
31	Nissan		2	17	19.7059	25.4118	3618.06
32	Oldsmobile		2	3	21.0000	29.0000	3326.33
33	Pontiac		2	11	20.5455	27.9091	3440.91
34	Porsche		2	7	17.4286	24.7143	3328.14
35	Saab		2	7	20.4286	28.8571	3441.43
36	Saturn		2	8	24.3750	32.8750	2908.13

Obs	Length_Mean	MPG_City_StdDev	MPG_Highway_StdDev	Weight_StdDev	Length_StdDev
19	193.000	1.4142	0.7071	799.74	21.2132
20	191.000	0.7977	1.8320	190.08	6.0902
21	168.333	2.3094	2.5166	135.72	16.2583
22	179.727	3.9358	4.8748	814.50	10.2087
23	185.000	3.4641	2.8868	902.77	10.0000
24	185.636	1.8635	3.1738	701.78	7.2287
25	202.889	2.4889	3.1667	744.80	11.4285
26	143.500	2.1213	2.1213	108.89	0.7071
27	177.818	3.5879	4.2448	435.58	13.8983
28	182.654	2.5759	3.7410	563.84	10.6844
29	204.222	1.4240	1.8782	423.73	8.0898
30	184.000	3.4991	3.8763	571.15	6.1509
31	189.588	4.0430	4.8742	759.06	14.5476
32	191.667	2.6458	3.0000	542.85	8.0829
33	189.182	3.7514	5.2432	545.96	9.7552
34	175.429	1.8127	3.4017	730.24	6.0238
35	185.714	0.7868	0.6901	201.59	4.0297
36	185.750	2.5036	3.6815	276.95	2.9641

## Monday, 23 March 2020 10:48:58 4 Статистики переменных WEIGHT, LENGTH MPG\_CITY MPG\_HIGHWAY для классифицирующих переменных ORIGIN MAKE с обобщенными статистиками

Obs	Make	Origin	_TYPE_	_FREQ_	MPG_City_Mean	MPG_Highway_Mean	Weight_Mean
37	Scion		2	2	31.5000	36.5000	2382.50
38	Subaru		2	11	20.2727	27.0909	3339.36
39	Suzuki		2	8	22.1250	27.8750	2977.88
40	Toyota		2	28	24.4286	30.6786	3277.29
41	Volkswagen		2	15	21.4000	28.5333	3663.20
42	Volvo		2	12	19.7500	26.6667	3592.50
43	Acura	Asia	3	7	19.4286	26.1429	3565.71
44	Audi	Europe	3	19	18.4737	25.7895	3700.63
45	BMW	Europe	3	20	18.7000	27.0000	3611.35
46	Buick	USA	3	9	18.8889	27.7778	3757.67
47	Cadillac	USA	3	8	16.5000	23.0000	4363.63
48	Chevrolet	USA	3	27	19.6667	26.8519	3640.22
49	Chrysler	USA	3	15	19.8667	27.3333	3534.33
50	Dodge	USA	3	13	19.3846	26.2308	3638.77
51	Ford	USA	3	23	19.2609	25.7391	3748.91
52	GMC	USA	3	8	15.3750	19.6250	4731.38
53	Honda	Asia	3	17	27.8235	34.0000	3101.00
54	Hummer	USA	3	1	10.0000	12.0000	6400.00

Obs	Length_Mean	MPG_City_StdDev	MPG_Highway_StdDev	Weight_StdDev	Length_StdDev
37	154.500	0.7071	2.1213	60.10	0.7071
38	181.545	1.1909	1.3003	221.42	6.3618
39	175.125	2.7999	3.8707	372.16	8.9513
40	185.286	9.3231	8.6583	894.97	15.9626
41	179.400	5.9618	6.4350	892.38	13.5161
42	184.667	1.8647	2.4246	486.41	4.5991
43	185.429	2.6992	3.1320	561.73	9.9809
44	181.421	2.3891	2.9170	364.84	12.3212
45	180.100	1.5927	2.4709	488.36	10.6173
46	197.889	1.6915	2.8186	382.23	6.4507
47	199.750	2.0000	3.7796	815.32	12.8146
48	191.630	4.5573	6.7351	880.11	17.3630
49	190.000	1.9223	1.9881	478.41	15.4827
50	194.231	5.0421	5.2939	709.44	13.8031
51	191.913	4.6144	5.6826	1110.32	18.4660
52	208.500	1.7678	2.3867	857.46	14.4420
53	179.294	11.3261	11.3743	718.67	12.9169
54	190.000				

#### Monday, 23 March 2020 10:48:58 5 Статистики переменных WEIGHT, LENGTH MPG\_CITY MPG\_HIGHWAY для классифицирующих переменных ORIGIN MAKE с обобщенными статистиками

Obs	Make	Origin	_TYPE_	_FREQ_	MPG_City_Mean	MPG_Highway_Mean	Weight_Mean
55	Hyundai	Asia	3	12	23.0000	29.9167	2930.00
56	Infiniti	Asia	3	8	17.2500	23.8750	3741.00
57	Isuzu	Asia	3	2	16.0000	20.5000	4401.50
58	Jaguar	Europe	3	12	17.5000	25.5833	3821.75
59	Jeep	USA	3	3	17.3333	21.3333	3730.33
60	Kia	Asia	3	11	21.9091	28.8182	3167.91
61	Land Rover	Europe	3	3	14.0000	17.6667	4510.67
62	Lexus	Asia	3	11	17.4545	23.4545	3909.00
63	Lincoln	USA	3	9	16.7778	23.4444	4323.67
64	MINI	Europe	3	2	26.5000	35.5000	2601.00
65	Mazda	Asia	3	11	21.4545	27.2727	2980.91
66	Mercedes-Benz	Europe	3	26	17.3462	23.6538	3851.92
67	Mercury	USA	3	9	17.5556	24.5556	3908.44
68	Mitsubishi	Asia	3	13	20.9231	27.2308	3358.15
69	Nissan	Asia	3	17	19.7059	25.4118	3618.06
70	Oldsmobile	USA	3	3	21.0000	29.0000	3326.33
71	Pontiac	USA	3	11	20.5455	27.9091	3440.91
72	Porsche	Europe	3	7	17.4286	24.7143	3328.14

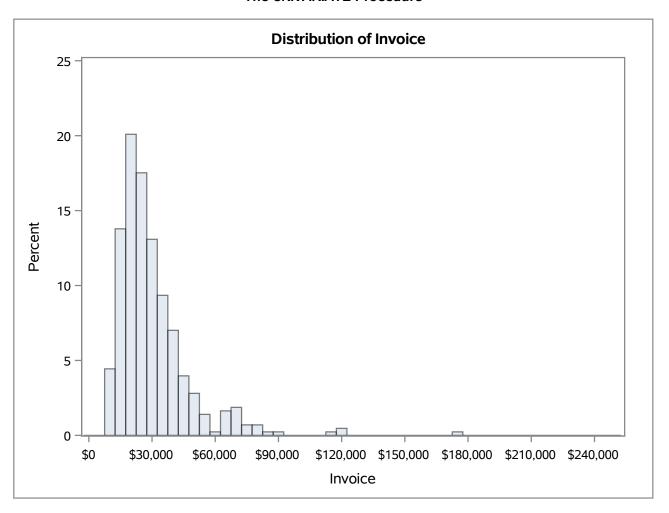
Obs	Length_Mean	MPG_City_StdDev	MPG_Highway_StdDev	Weight_StdDev	Length_StdDev
55	178.583	4.8990	3.7769	525.58	9.2388
56	190.625	1.2817	2.5877	368.90	5.9266
57	193.000	1.4142	0.7071	799.74	21.2132
58	191.000	0.7977	1.8320	190.08	6.0902
59	168.333	2.3094	2.5166	135.72	16.2583
60	179.727	3.9358	4.8748	814.50	10.2087
61	185.000	3.4641	2.8868	902.77	10.0000
62	185.636	1.8635	3.1738	701.78	7.2287
63	202.889	2.4889	3.1667	744.80	11.4285
64	143.500	2.1213	2.1213	108.89	0.7071
65	177.818	3.5879	4.2448	435.58	13.8983
66	182.654	2.5759	3.7410	563.84	10.6844
67	204.222	1.4240	1.8782	423.73	8.0898
68	184.000	3.4991	3.8763	571.15	6.1509
69	189.588	4.0430	4.8742	759.06	14.5476
70	191.667	2.6458	3.0000	542.85	8.0829
71	189.182	3.7514	5.2432	545.96	9.7552
72	175.429	1.8127	3.4017	730.24	6.0238

#### Молдау, 23 March 2020 10:48:58 6 Статистики переменных WEIGHT, LENGTH MPG\_CITY MPG\_HIGHWAY для классифицирующих переменных ORIGIN MAKE с обобщенными статистиками

Obs	Make	Origin	_TYPE_	_FREQ_	MPG_City_Mean	MPG_Highway_Mean	Weight_Mean
73	Saab	Europe	3	7	20.4286	28.8571	3441.43
74	Saturn	USA	3	8	24.3750	32.8750	2908.13
75	Scion	Asia	3	2	31.5000	36.5000	2382.50
76	Subaru	Asia	3	11	20.2727	27.0909	3339.36
77	Suzuki	Asia	3	8	22.1250	27.8750	2977.88
78	Toyota	Asia	3	28	24.4286	30.6786	3277.29
79	Volkswagen	Europe	3	15	21.4000	28.5333	3663.20
80	Volvo	Europe	3	12	19.7500	26.6667	3592.50

Obs	Length_Mean	MPG_City_StdDev	MPG_Highway_StdDev	Weight_StdDev	Length_StdDev
73	185.714	0.7868	0.6901	201.59	4.0297
74	185.750	2.5036	3.6815	276.95	2.9641
75	154.500	0.7071	2.1213	60.10	0.7071
76	181.545	1.1909	1.3003	221.42	6.3618
77	175.125	2.7999	3.8707	372.16	8.9513
78	185.286	9.3231	8.6583	894.97	15.9626
79	179.400	5.9618	6.4350	892.38	13.5161
80	184.667	1.8647	2.4246	486.41	4.5991

#### The UNIVARIATE Procedure



# Monday, 23 March 2020 10:48:58 **8 Корреляционная матрица Пирсона для переменных INVOICE LENGTH с переменными HORSEPOWER WEIGHT**

#### The CORR Procedure

2 With Variables:		Horsepower Weight
2	Variables:	Invoice Length

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
Horsepower	428	215.88551	71.83603	92399	73.00000	500.00000	
Weight	428	3578	758.98321	1531364	1850	7190	Weight (LBS)
Invoice	428	30015	17642	12846292	9875	173560	
Length	428	186.36215	14.35799	79763	143.00000	238.00000	Length (IN)

Pearson Correlation Coefficients, N = 428 Prob >  r  under H0: Rho=0						
	Invoice	Length				
Horsepower	0.82375 <.0001	0.38155 <.0001				
Weight Weight (LBS)	0.44233 <.0001	0.69002 <.0001				