TÜRKİYE CUMHURİYETİ

KOCAELİ ÜNİVERSİTESİ

MÜHENDİSLİK FAKÜLTESİ

HARİTA MÜHENDİSLİĞİ

TASARIM PROJESİ ÖDEV I

GitHub ile ödevin dosyalarına buradan ulaşabilirsiniz.

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HAZIRLAYANLAR

1 - Mert Kaplan 180227006

2 - Alim İsmail Kaş 180227041

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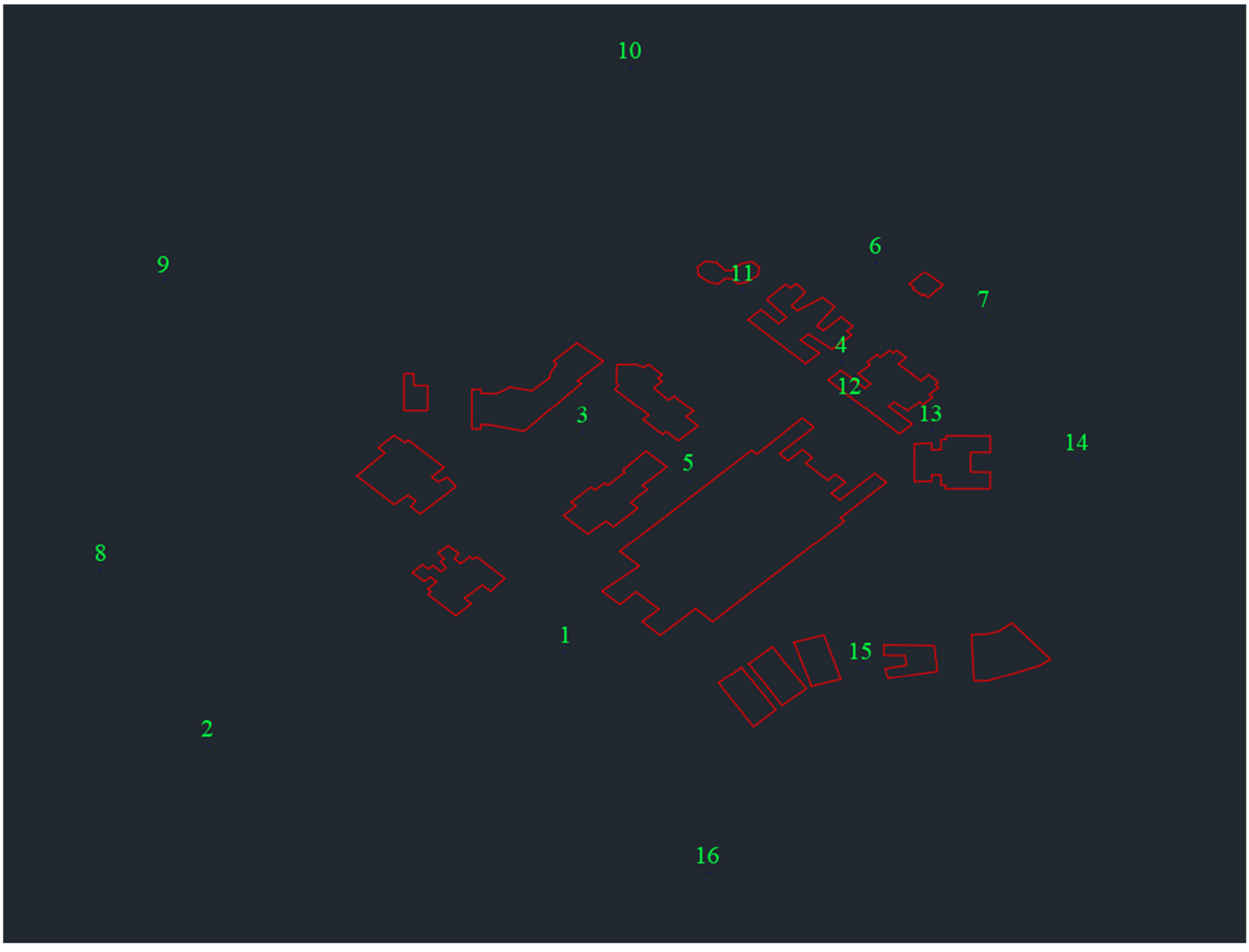
5 - Çağatay Kırlı 180227030

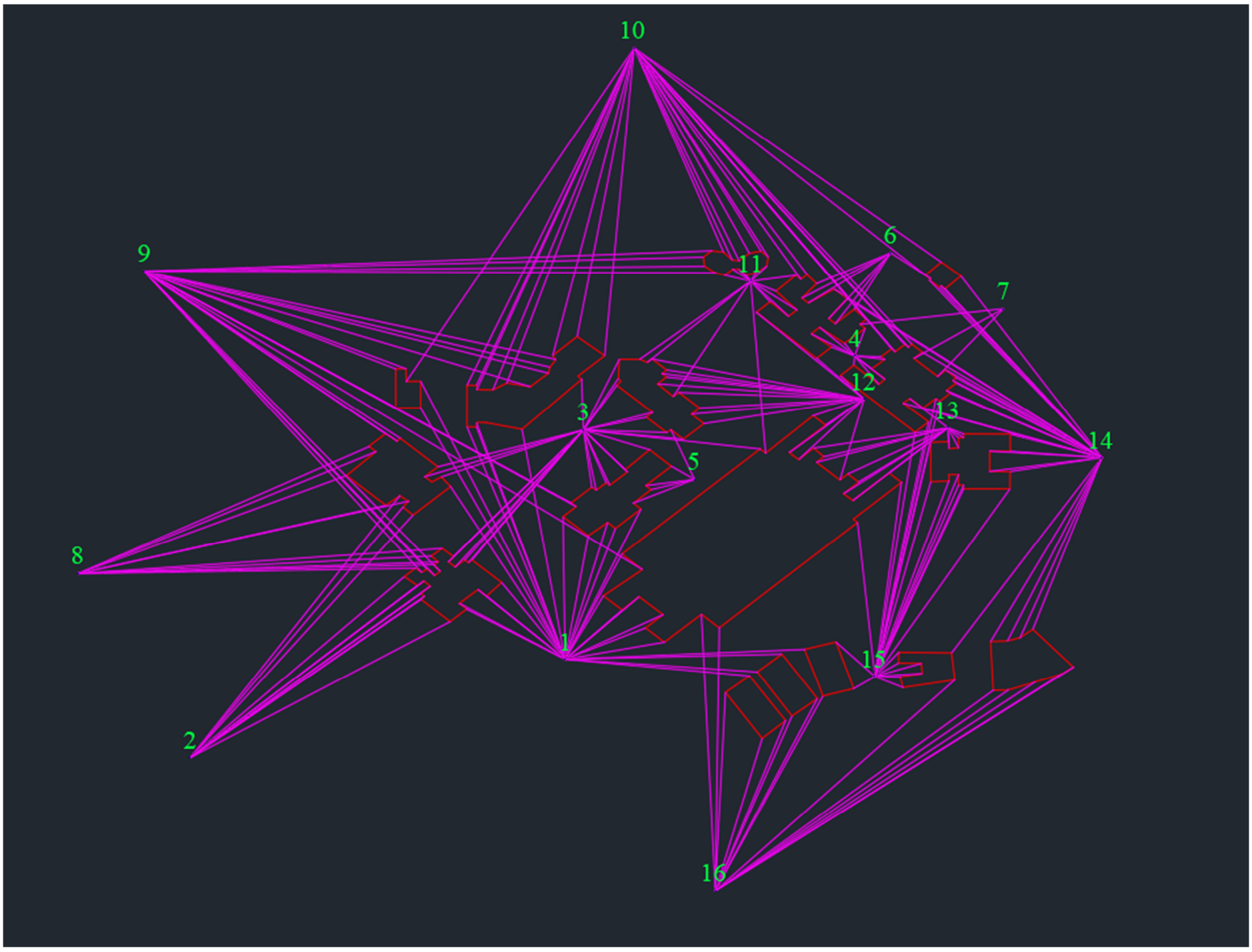
6 - Erkan Akça 180227047

Mayıs 2021, Kocaeli

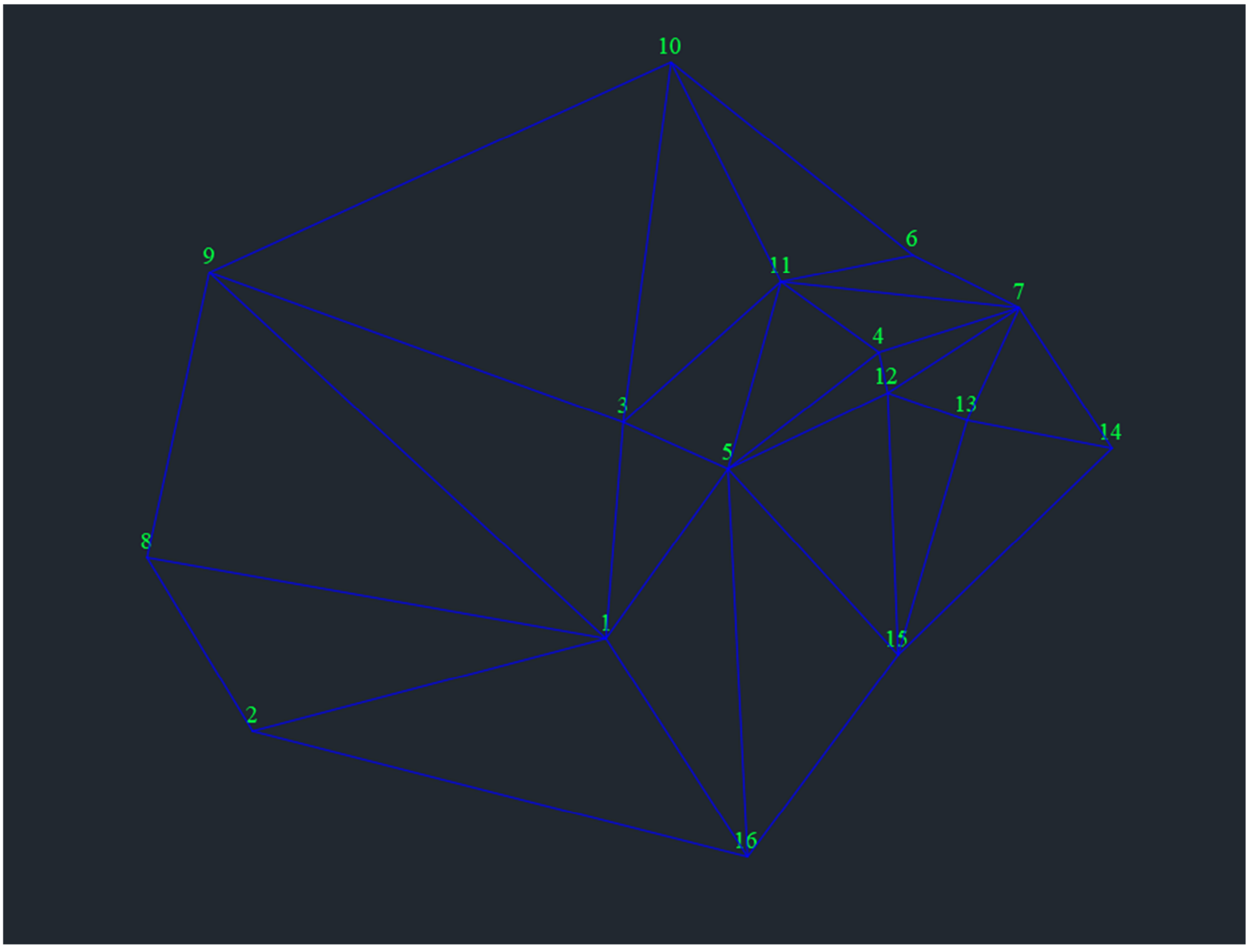
1-a)



1-b)



1-c)



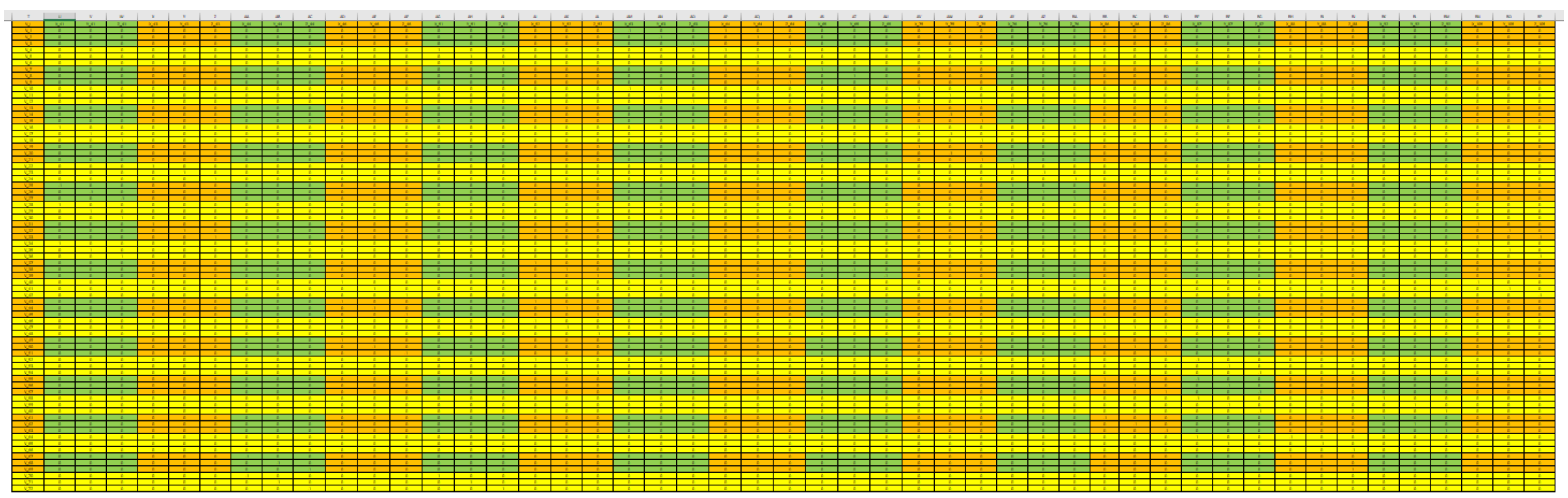
2-a)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	COĞRAFİ KOORDİNATLAR [GRS80]													
2	Nokta No	Nokta Adı	Φ0	λ0	h [m]	H [m]		Φr	λr		N(m)	a(m)	e2	e'2
3	41	G2331081	40.798224	29.873423	405.4971	369.456		0.712063338	0.52138959		6387270.996	6378137	0.00669438	0.006739497
4	43	G2331097	40.743739	29.794323	36.8425	0.6469		0.711112395	0.520009035		6387250.829			
5	44	G2331253	40.982187	29.975213	286.6603	251.0183		0.715274098	0.523166161		6387339.13			
6	46	G23A0003	40.732093	29.941499	39.5141	3.5407		0.710909134	0.522577741		6387246.519			
7	51	G23S0004	40.985149	29.90182	401.452	365.5921		0.715325794	0.521885211		6387340.228			
8	52	G23S0007	40.82352	29.975195	301.7789	265.8313		0.712504836	0.523165847		6387280.361			
9	63	G23S0030	40.911933	29.792909	307.4099	271.3494		0.714047934	0.519984356		6387313.103			
10	64	G23S0031	40.937457	29.849182	351.7663	315.7638		0.714493412	0.520966505		6387322.558			
11	65	G23S0032	40.821244	29.907949	528.9837	492.9266		0.712465113	0.521992183		6387279.518			
12	75	G23S0053	40.844296	29.789868	427.6489	391.4413		0.712867446	0.51993128		6387288.053			
13	76	G23S0054	40.783893	29.7966	229.5995	193.3845		0.711813215	0.520048776		6387265.691			
14	86	G24S0020	40.782799	30.040476	141.4262	105.5062		0.711794121	0.524305215		6387265.286			
15	87	G24S0021	40.86023	30.022062	474.9719	439.1387		0.713145547	0.52398383		6387293.954			
16	88	G24S0022	40.935391	30.045051	303.5153	267.7433		0.714457354	0.524385064		6387321.792			
17	92	G24S0039	40.788228	30.097271	148.2174	112.3935		0.711888875	0.525296475		6387267.295			
18	105	IZGZ	40.76203	29.887933	49.1155	13.0769		0.711431633	0.521642837		6387257.598			
19														
20														

	A	B	C	D	E
21	KARTEZYEN KOORDİNATLAR [GRS80]				
22	Nokta No	Nokta Adı	X(m)	Y(m)	Z(m)
23	41	G2331081	4193056.61683	2408527.09372	4145751.05451
24	43	G2331097	4199564.48559	2404560.70884	4140927.92639
25	44	G2331253	4177108.09868	2409245.64855	4161118.03008
26	46	G23A0003	4194107.13526	2415762.47153	4139949.74623
27	51	G23S0004	4180078.88759	2403828.65578	4161441.64517
28	52	G23S0007	4187113.38065	2415014.67796	4147809.53324
29	63	G23S0030	4189203.75959	2398491.15119	4155238.45123
30	64	G23S0031	4185264.58470	2401696.89144	4157409.28722
31	65	G23S0032	4190237.18310	2410266.86825	4147766.78159
32	75	G23S0053	4193676.32080	2400756.34091	4149637.57413
33	76	G23S0054	4197068.96182	2403353.32126	4144431.19368
34	86	G24S0020	4186812.14906	2421202.37022	4144281.60696
35	87	G24S0021	4182941.49725	2417170.42456	4151007.06161
36	88	G24S0022	4177128.38751	2416047.42492	4157204.33963
37	92	G24S0039	4184073.76554	2425156.48130	4144742.53727
38	105	IZGZ	4194488.74538	2410762.65062	4142474.64760

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	KARTEZYEN KOORDİNATLAR [GRS80]						Noktalar arası baz vektörleri, standart sapma ve korelasyon değerleri									
2	Nokta No	Nokta Adı	X(m)	Y(m)	Z(m)		Baz (DN-BN)	dX [m]	dY [m]	dZ [m]	sigmaX [m]	sigmaY [m]	sigmaZ [m]	corrXY	corrXZ	corrYZ
3	41	G2331081	4193056.61683	2408527.09372	4145751.05451	63-64	G2350030-G2350031	-3939.1327	3205.7534	2170.7706	0.003	0.002	0.003	0.5	0.65	0.06
4	43	G2331097	4199564.48559	2404560.70884	4140927.92639	64-51	G2350031-G2350004	-5185.7415	2131.7103	4032.4205	0.004	0.003	0.004	0.52	0.49	0.64
5	44	G2331253	4177108.09868	2409245.64855	4161118.03008	64-65	G2350031-G2350032	4972.5996	8569.9617	-9642.4821	0.007	0.005	0.007	0.52	0.67	0.11
6	46	G23A0003	4194107.13526	2415762.47153	4139949.74623	63-75	G2350030-G2350053	4472.6332	2265.152	-5600.9311	0.004	0.002	0.004	0.4	0.65	-0.04
7	51	G23S0004	4180078.88759	2403828.65578	4161441.64517	75-76	G2350053-G2350054	3392.6228	2596.9818	-5206.3477	0.004	0.003	0.004	0.78	0.84	0.71
8	52	G23S0007	4187113.38065	2415014.67796	4147809.53324	75-41	G2350053-G2331081	-619.7746	7770.7473	-3886.4651	0.006	0.004	0.006	0.77	0.9	0.75
9	63	G23S0030	4189203.75959	2398491.15119	4155238.45123	75-65	G2350053-G2350032	-3439.1815	9510.5594	-1870.7795	0.006	0.004	0.006	0.75	0.87	0.75
10	64	G23S0031	4185264.58470	2401696.89144	4157409.28722	76-43	G2350054-G2331097	2495.5009	1207.4084	-3503.2524	0.002	0.002	0.002	0.72	0.82	0.49
11	65	G23S0032	4190237.18310	2410266.86825	4147766.78159	41-76	G2331081-G2350054	4012.3689	-5173.7761	-1319.9004	0.004	0.003	0.003	0.75	0.83	0.55
12	75	G23S0053	4193676.32080	2400756.34091	4149637.57413	65-41	G2350032-G2331081	2819.422	-1739.8003	-2015.6997	0.003	0.002	0.003	0.59	0.72	0.23
13	76	G23S0054	4197068.96182	2403353.32126	4144431.19368	105-43	IZGZ-G2331097	5075.703	-6201.9855	-1546.6628	0.004	0.003	0.004	0.76	0.79	0.48
14	86	G24S0020	4186812.14906	2421202.37022	4144281.60696	105-41	IZGZ-G2331081	-1432.1702	-2235.6151	3276.4847	0.002	0.002	0.002	0.66	0.78	0.37
15	87	G24S0021	4182941.49725	2417170.42456	4151007.06161	65-52	G2350032-G2350007	-3123.7484	4747.8031	42.6965	0.006	0.004	0.005	0.85	0.84	0.73
16	88	G24S0022	4177128.38751	2416047.42492	4157204.33963	105-46	IZGZ-G23A0003	-381.6609	4999.7902	-2524.8337	0.003	0.002	0.003	0.66	0.73	0.41
17	92	G24S0039	4184073.76554	2425156.48130	4144742.53727	46-52	G23A0003-G2350007	-6993.6805	-747.797	7859.7283	0.009	0.007	0.008	0.87	0.83	0.76
18	105	IZGZ	4194488.74538	2410762.65062	4142474.64760	52-86	G2350007-G2450020	-301.3012	6187.6865	-3527.8693	0.004	0.002	0.004	0.6	0.61	0.3
19						46-86	G23A0003-G2450020	-7294.9811	5439.885	4331.8835	0.009	0.004	0.008	0.59	0.73	0.29
20						87-52	G2450021-G2350007	4171.9319	-2155.7224	-3197.6071	0.003	0.003	0.002	0.77	0.68	0.56
21						87-86	G2450021-G2450020	3870.6402	4031.9636	-6725.4678	0.004	0.003	0.004	0.56	0.59	0.46
22						87-92	G2450021-G2450039	1132.3057	7986.1178	-6264.5775	0.006	0.005	0.005	0.62	0.66	0.47
23						86-92	G2450020-G2450039	-2738.3426	3954.1355	460.8897	0.003	0.002	0.003	0.43	0.75	0.15
24						88-87	G2450022-G2450021	5813.0467	1122.9059	-6197.2178	0.005	0.003	0.005	0.66	0.55	0.4
25						44-88	G2331253-G2450022	20.2528	6801.8252	-3913.6905	0.004	0.002	0.004	0.72	0.71	0.46
26						44-51	G2331253-G2350004	2970.7275	-5416.9977	323.6836	0.004	0.003	0.003	0.65	0.75	0.42

27	S_0 =	1									
28											
29											
30	Bar (DN-BN)	K_ll			Q_ll			P_ll = Q_ll ^-1			δ (cm)
31		0.000009	0.000003	0.00000585	0.000009	0.000003	0.00000585	305073.329	-211720.4	-189828.848	4.21900
32	G23S0030-G23S0031	0.000003	0.000004	0.00000036	0.000003	0.000004	0.00000036	-211720.4005	397836.87	121704.786	1.31500002
33		0.00000585	0.00000036	0.000009	0.00000585	0.00000036	0.000009	-189828.8479	121704.786	229631.671	-6.539000005
34		0.000016	0.00000624	0.00000784	0.000016	0.00000624	0.00000784	90876.85078	-42359.9413	-24196.8851	-4.438999993
35	G23S0031-G23S0004	0.00000624	0.000009	0.00000768	0.00000624	0.000009	0.00000768	-42359.94129	207941.34	-79055.4718	-5.404000023
36		0.00000784	0.00000768	0.000016	0.00000784	0.00000768	0.000016	-24196.88507	-79055.4718	112303.1	6.254999991
37		0.000049	0.0000182	0.00003283	0.000049	0.0000182	0.00003283	58396.35419	-36934.1128	-36223.5913	0.119999998
38	G23S0031-G23S0032	0.0000182	0.000025	0.00000385	0.0000182	0.000025	0.00000385	-36934.11279	63849.7544	19729.0892	-1.510999991
39		0.00003283	0.00000385	0.000049	0.00003283	0.00000385	0.000049	-36223.5913	19729.0892	43127.8267	2.353000003
40		0.000016	0.0000032	0.0000104	0.000016	0.0000032	0.0000104	157934.7001	-134776.006	-105353.075	7.199000004
41	G23S0030-G23S0053	0.0000032	0.000004	-0.00000032	0.0000032	0.000004	-0.00000032	-134776.0061	365413.819	94912.6803	-3.771999967
42		0.0000104	-0.00000032	0.000016	0.0000104	-0.00000032	0.000016	-105353.0752	94912.6803	132877.752	-5.400000031
43		0.000016	0.00000936	0.00001344	0.000016	0.00000936	0.00001344	276029.9776	-136261.622	-159305.867	-1.821999998
44	G23S0053-G23S0054	0.00000936	0.000009	0.00000852	0.00000936	0.000009	0.00000852	-136261.6223	291324.776	-40670.6803	0.144999968
45		0.00001344	0.00000852	0.000016	0.00001344	0.00000852	0.000016	-159305.8673	-40670.6803	217974.066	3.275000005
46		0.000036	0.00001848	0.0000324	0.000036	0.00001848	0.0000324	164005.0982	-53418.8034	-120895.187	-7.063000032
47	G23S0053-G2331081	0.00001848	0.000016	0.000018	0.00001848	0.000016	0.000018	-53418.80342	160256.41	-32051.2821	-0.550999998
48		0.0000324	0.000018	0.000036	0.0000324	0.000018	0.000036	-120895.1867	-32051.2821	152609.087	5.451999992
49		0.000036	0.000018	0.00003132	0.000036	0.000018	0.00003132	125480.4107	-41946.3087	-88194.803	-4.380000015
50	G23S0053-G23S0032	0.000018	0.000016	0.000018	0.000018	0.000016	0.000018	-41946.30872	156879.195	-41946.3087	3.205999997
51		0.00003132	0.000018	0.000036	0.00003132	0.000018	0.000036	-88194.80296	-41946.3087	125480.411	1.304000029
52		0.000004	0.00000288	0.00000328	0.000004	0.00000288	0.00000328	1286291.742	-538620.914	-790834.981	-2.286999985
53	G23S0054-G2331097	0.00000288	0.000004	0.00000196	0.00000288	0.000004	0.00000196	-538620.9138	554532.405	169948.271	2.082000014
54		0.00000328	0.00000196	0.000004	0.00000328	0.00000196	0.000004	-790834.9809	169948.271	815210.032	1.488999987
55		0.000016	0.000009	0.00000996	0.000016	0.000009	0.00000996	333158.1964	-186918.864	-265889.696	2.391000034
56	G2331081-G23S0054	0.000009	0.000009	0.00000495	0.000009	0.000009	0.00000495	-186918.8638	264170.169	61563.2828	-0.364000034
57		0.00000996	0.00000495	0.000009	0.00000996	0.00000495	0.000009	-265889.6956	61563.2828	371502.569	-3.956999986
58		0.000009	0.00000354	0.00000648	0.000009	0.00000354	0.00000648	381269.142	-256272.765	-235218.625	-1.173000016
59	G23S0032-G2331081	0.00000354	0.000004	0.00000138	0.00000354	0.000004	0.00000138	-256272.765	436219.24	117629.441	-2.576999995
60		0.00000648	0.00000138	0.000009	0.00000648	0.00000138	0.000009	-235218.6249	117629.441	262432.007	2.737999963
61		0.000016	0.00000912	0.00001264	0.000016	0.00000912	0.00001264	333370.2975	-219936.607	-184185.357	-3.720999949
62	I2G2-G2331097	0.00000912	0.000009	0.00000576	0.00000912	0.000009	0.00000576	-219936.6065	289475.387	69538.78	-4.372000001
63		0.00001264	0.00000576	0.000016	0.00001264	0.00000576	0.000016	-184185.3567	69538.78	182972.471	5.840999964
64		0.000004	0.00000264	0.00000312	0.000004	0.00000264	0.00000312	1078594.565	-464129.326	-669575.91	-4.164999998
65	I2G2-G2331081	0.00000264	0.000004	0.00000148	0.00000264	0.000004	0.00000148	-464129.3264	489372.763	180952.952	-5.81999998
66		0.00000312	0.00000148	0.000004	0.00000312	0.00000148	0.000004	-669575.9103	180952.952	705316.618	7.778999963
67		0.000036	0.0000204	0.0000252	0.000036	0.0000204	0.0000252	159319.7446	-121152.587	-89841.1919	5.404999984
68	G23S0032-G23S0007	0.0000204	0.000016	0.0000146	0.0000204	0.000016	0.0000146	-121152.5868	225933.202	-9823.18271	-0.661000018
69		0.0000252	0.0000146	0.000025	0.0000252	0.0000146	0.000025	-89841.19188	-9823.18271	136296.66	-5.514999999
70		0.000009	0.00000396	0.00000657	0.000009	0.00000396	0.00000657	357608.9592	-232581.233	-197482.337	-5.077999968
71	I2G2-G23A0003	0.00000396	0.000004	0.00000246	0.00000396	0.000004	0.00000246	-232581.2326	451782.757	46297.0127	-3.071000024
72		0.00000657	0.00000246	0.000009	0.00000657	0.00000246	0.000009	-197482.3366	46297.0127	242618.7	6.766999963
73		0.000081	0.00005481	0.00005976	0.000081	0.00005481	0.00005976	70288.10134	-51175.6712	-31599.6933	7.410999971
74	G23A0003-G23S0007	0.00005481	0.000049	0.00004256	0.00005481	0.000049	0.00004256	-51175.67119	85574.9891	-9122.08478	-0.342999979
75		0.00005976	0.00004256	0.000064	0.00005976	0.00004256	0.000064	-31599.69329	-9122.08478	51197.4	-5.870999962
76		0.000016	0.0000048	0.00000976	0.000016	0.0000048	0.00000976	143081.761	-131132.075	-67610.0629	-6.961000002
77	G23S0007-G24S0020	0.0000048	0.000004	0.0000024	0.0000048	0.000004	0.0000024	-131132.0755	394905.66	20754.717	-0.575999992
78		0.00000976	0.0000024	0.000016	0.00000976	0.0000024	0.000016	-67610.06289	20754.717	100628.931	5.607999978
79		0.000081	0.00002124	0.00005256	0.000081	0.00002124	0.00005256	39716.08399	-36909.42	-27264.9681	0.509999969
80	G23A0003-G24S0020	0.00002124	0.000016	0.00000928	0.00002124	0.000016	0.00000928	-36909.42001	102539.989	15443.5628	-1.368999971
81		0.00005256	0.00000928	0.000064	0.00005256	0.00000928	0.000064	-27264.96807	15443.5628	35777.0384	2.277000016
82		0.000009	0.00000693	0.00000408	0.000009	0.00000693	0.00000408	350599.7585	-198795.784	-190623.295	4.849999983
83	G24S0021-G23S0007	0.00000693	0.000009	0.00000336	0.00000693	0.000009	0.00000336	-198795.7838	274595.615	-27888.6172	2.420000019
84		0.00000408	0.00000336	0.000004	0.00000408	0.00000336	0.000004	-190623.2953	-27888.6172	467862.2	-7.872999958
85		0.000016	0.00000672	0.00000944	0.000016	0.00000672	0.00000944	114415.2804	-55843.4804	-48239.0147	-1.161000019
86	G24S0021-G24S0020	0.00000672	0.000009	0.00000552	0.00000672	0.000009	0.00000552	-55843.48036	168188.334	-25077.3217	1.794000026
87		0.00000944	0.00000552	0.000016	0.00000944	0.00000552	0.000016	-48239.01474	-25077.3217	99612.6947	-1.31499998
88		0.000036	0.0000186	0.0000198	0.000036	0.0000186	0.0000198	62957.94206	-30041.3869	-35743.2383	3.740999996
89	G24S0021-G24S0039	0.0000186	0.000025	0.00001175	0.0000186	0.000025	0.00001175	-30041.38691	65676.0185	-7074.95025	6.106000009
90		0.0000198	0.00001175	0.000025	0.0000198	0.00001175	0.000025	-35743.23826	-7074.95025	71633.8713	-5.316
91		0.000009	0.00000258	0.00000675	0.000009	0.00000258	0.00000675	332296.5003	-161898.934	-233032.482	4.092000015
92	G24S0020-G24S0039	0.00000258	0.000004	0.0000009	0.00000258	0.000004	0.0000009	-161898.9343	334633.624	87960.8383	2.441999982
93		0.00000675	0.0000009	0.000009	0.00000675	0.0000009	0.000009	-233032.4818	87960.8383	277089.389	-4.06100002
94		0.000025	0.0000099	0.00001375	0.000025	0.0000099	0.00001375	85648.73821	-74772.708	-29161.3561	-6.304000022
95	G24S0022-G24S0021	0.0000099	0.000009	0.000006	0.0000099	0.000009	0.000006	-74772.70796	197552.893	-6287.70499	-0.374000005
96		0.00001375	0.000006	0.000025	0.00001375	0.000006	0.000025	-29161.35611	-6287.70499	57547.7951	6.021999962
97		0.000016	0.00000576	0.00001136	0.000016	0.00000576	0.00001136	208612.0472	-208188.684	-100231.156	-3.602999998
98	G2331253-G24S0022	0.00000576	0.000004	0.00000368	0.00000576	0.000004	0.00000368	-208188.6844	524864.101	27095.2228	4.882999991
99		0.00001136	0.00000368	0.000016	0.00001136	0.00000368	0.000016	-100231.1561	27095.2228	127432.22	-0.004999989
100		0.000016	0.0000078	0.000009	0.000016	0.0000078	0.000009	207476.8239	-112521.833	-160217.654	-6.141000012
101	G2331253-G23S0004	0.0000078	0.000009	0.00000378	0.0000078	0.000009	0.00000378	-112521.8326	195933.539	30229.7461	-0.49300001
102		0.000009	0.00000378	0.000009	0.000009	0.00000378	0.000009	-160217.6542	30229.7461	258632.272	6.851000002



107	P(nokta sayısı) =	16		
108				
109		0.25	0	0
110		0	0.25	0
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112		0.25	0	0
113		0	0.25	0
114		0	0	0.25
115		0.25	0	0
116		0	0.25	0
117		0	0	0.25
118		0.25	0	0
119		0	0.25	0
120		0	0	0.25
121		0.25	0	0
122		0	0.25	0
123		0	0	0.25
124		0.25	0	0
125		0	0.25	0
126		0	0	0.25
127	G	0.25	0	0
128		0	0.25	0
129		0	0	0.25
130		0.25	0	0
131		0	0.25	0
132		0	0	0.25
133		0.25	0	0
134		0	0.25	0
135		0	0	0.25
136		0.25	0	0
137		0	0.25	0
138		0	0	0.25
139		0.25	0	0
140		0	0.25	0
141		0	0	0.25
142		0.25	0	0
143		0	0.25	0
144		0	0	0.25
145		0.25	0	0
146		0	0.25	0
147		0	0	0.25
148		0.25	0	0
149		0	0.25	0
150		0	0	0.25
151		0.25	0	0
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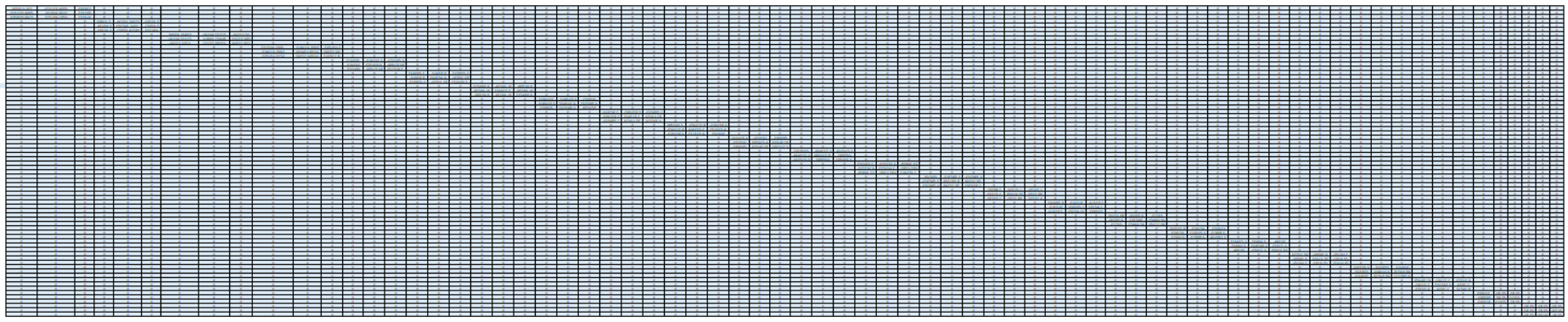
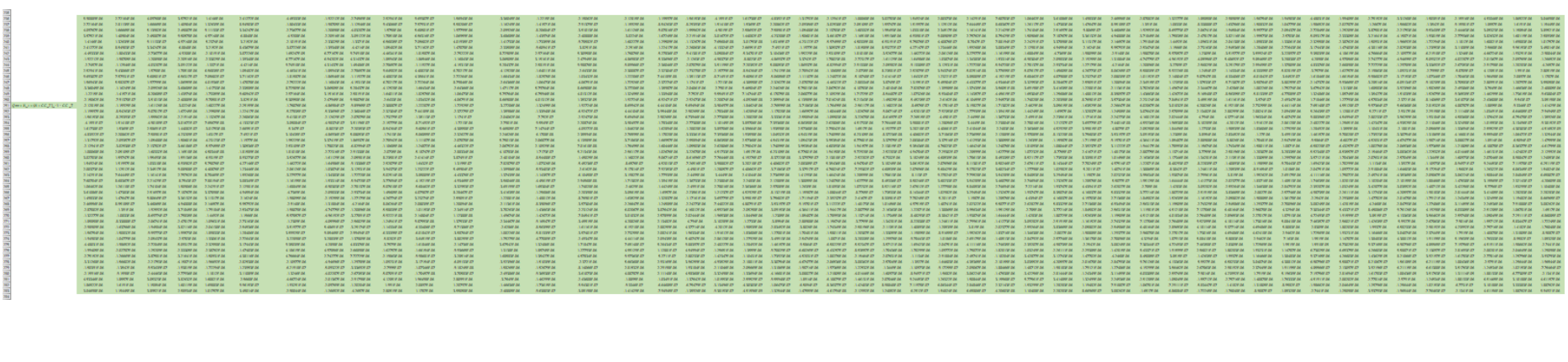
155		0	0.25	0
156		0	0	0.25





M	N	O	P	Q	R
X = N_+ * A_T * P_ll * l (cm)	v = A * x - l (cm)		n	72	
-2.117716865	0.154105045		u	48	
-2.308099137	0.197231838		f	21	
3.81877992	0.129823332		V_T*P*V	2134615.62	cm_2
-1.496984662	1.146434218		V_T*P*l	-2134615.63	cm_2
-0.633389413	0.417407822		l_T*P*l - X_T*A_T*P*l	2134615.63	cm_2
1.84821721	-0.032406617		m_o = ((V_T*P*V)/(n-u))^1/2	318.8234041	cm
5.017250406	-1.927871494				
-0.448639838	-1.077992696				
-2.884469684	0.936130683		Test Büyüklüğü	T = (m_0)^2 /(s_0)^2	101648.363
-3.350383327	-0.142467913		Sınır Değer	f	2.08418862
0.252938786	-0.176651885				
2.073878731	-0.17162356				
-2.259146278	-1.022439513				
-1.746289249	-0.525189153				
3.606140755	-1.080386738				
3.311890149	1.228436613				
-0.70685176	0.463481619				
-4.627459778	0.145679464				
-3.339685538	-0.111298536				
1.728071094	-0.334108973				
3.792724055	1.147577575				
1.033419498	-0.082391719				
3.240302952	-0.114619483				
-2.616452618	-0.056496509				
-0.774451998	0.599123874				
0.651310266	0.071329227				
0.672678067	0.553933798				
3.716846553	-0.170264851				
-2.220580759	-0.382409408				
-1.778899536	0.40810189				
0.872407042	0.260304488				
-2.600769944	0.257252417				
0.415713732	0.166325054				
-3.360857963	0.083572333				
-1.260913974	0.030542673				
1.864543499	0.198887766				
-2.288651325	-1.318657837				
-3.665561794	-0.697162008				
3.079715814	0.214862154				
2.314492734	-0.236094158				
4.863404779	-0.15741936				
-2.777807203	-0.534013423				
0.757860784	-0.748726495				
1.373709819	-0.616790567				
-2.328195154	-0.830338547				
1.963710799	0.28825189				
3.48135817	0.021937778				
-4.159107809	0.794003298				
	-0.520474606				
	-0.144852789				
	-2.486335248				
	0.75054149				
	0.538710015				
	0.165824366				
	0.08879338				
	0.610647793				
	0.099827665				
	-0.694487888				
	-1.066728396				
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	0.026718732				
	0.192623811				
	-0.131738633				
	1.700855963				
	0.845033433				
	-0.164476945				
	0.900242326				
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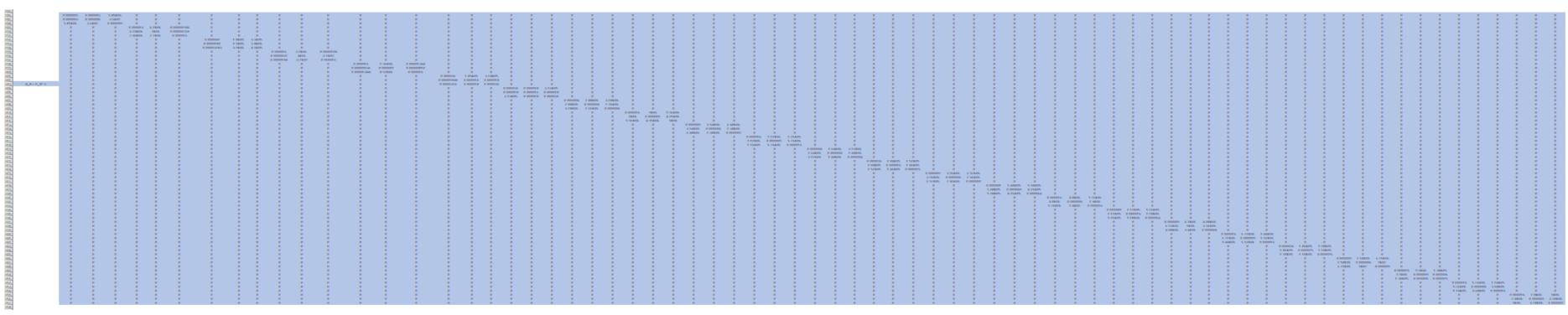
	0.111662471				
	-1.135396672				
	-0.804649401				
	-0.360389562				



[illegible]

[illegible]

511							
512							
513		39843.59017	-25745.3951	-23807.93299			-19388.87817
514	Q_DELTA_DELTA_1	-25745.3951	53831.89941	8936.282303			61639.03584
515		-23807.93299	8936.282302	30451.54387			24562.02403
516		20127.25684	-13267.81426	-9838.854882			87287.09973
517	Q_DELTA_DELTA_2	-13267.81426	32646.26324	-943.8130415			40795.37586
518		-9838.854882	-943.8130411	16799.63235			-64377.87285
519		36521.51261	-23263.49924	-22233.93846			-106675.978
520	Q_DELTA_DELTA_3	-23263.49924	43530.57849	10485.42576			20843.66002
521		-22233.93846	10485.42576	27312.85632			88939.89693
522		39843.59017	-25745.3951	-23807.93299			19388.87826
523	Q_DELTA_DELTA_4	-25745.3951	53831.89941	8936.282303			-61639.0359
524		-23807.93299	8936.282303	30451.54387			-24562.02409
525		109899.5204	-53583.15098	-70341.35063			-38548.88356
526	Q_DELTA_DELTA_5	-53583.15098	106919.5465	-4860.894098			30258.71809
527		-70341.35063	-4860.894099	91158.17208			-51255.8763
528		104624.8598	-42033.96581	-72464.83687			159099.2878
529	Q_DELTA_DELTA_6	-42033.96581	104260.1543	-13038.94817			3985.072996
530		-72464.83687	-13038.94817	91421.64304		P*V	-141135.2438
531		80068.4976	-35168.59791	-52346.20548			-101161.5259
532	Q_DELTA_DELTA_7	-35168.59791	91848.00503	-11352.62116			-95882.82707
533		-52346.20548	-11352.62116	69257.72996			167829.0959
534		141962.7416	-78840.45361	-87235.3099			436.0792144
535	Q_DELTA_DELTA_8	-78840.45361	104913.0041	23245.37812			-28783.79872
536		-87235.3099	23245.37813	97002.80282			-377.6509389
537		161670.9118	-88424.71396	-109195.945			38984.96221
538	Q_DELTA_DELTA_9	-88424.71396	135069.0416	17577.59697			-59042.51669
539		-109195.945	17577.59697	138623.5754			50878.22578
540		111202.1577	-62571.75471	-69398.44953			-62908.7827
541	Q_DELTA_DELTA_10	-62571.75471	124275.4483	6363.426806			-75175.30001
542		-69398.44953	6363.426805	86614.50213			102165.8573
543		141962.7416	-78840.45362	-87235.30992			-436.0784112
544	Q_DELTA_DELTA_11	-78840.45362	104913.0041	23245.37814			28783.79848
545		-87235.30992	23245.37814	97002.80283			377.6503878
546		170662.3263	-95644.14974	-105053.1424			-57205.54254
547	Q_DELTA_DELTA_12	-95644.14974	135651.2502	26057.56513			12147.70985
548		-105053.1424	26057.56513	121241.2628			89847.61198
549		54277.62504	-38726.88587	-30221.43347			-144928.7213
550	Q_DELTA_DELTA_13	-38726.88587	74066.94417	1215.104706			136.1329232
551		-30221.43347	1215.104706	43376.68102			154603.1356
552		48538.86747	-34112.85194	-27087.46498			57641.62127
553	Q_DELTA_DELTA_14	-34112.85194	65872.98718	2807.227506			-40931.50859
554		-27087.46498	2807.227507	37548.22117			-90225.26261
555		44089.70641	-30611.77287	-22455.60711			5176.550875
556	Q_DELTA_DELTA_15	-30611.77287	53288.93783	-2501.946546			-6890.846495
557		-22455.60711	-2501.946546	33161.67198			-13225.23125
558		70316.78709	-48189.46353	-34922.46278			-15315.7713
559	Q_DELTA_DELTA_16	-48189.46353	114360.7683	2856.483992			-12656.40216
560		-34922.46278	2856.483991	58253.19314			60866.28697
561		27339.77256	-21237.29295	-17388.63263			52465.07045
562	Q_DELTA_DELTA_17	-21237.29295	52597.65943	5026.470424			-34040.66216
563		-17388.63263	5026.470424	23834.7628			-77000.03135
564		78201.13171	-47294.6104	-39218.4469			124436.3985
565	Q_DELTA_DELTA_18	-47294.6104	96471.97318	-789.7124143			-5901.688156
566		-39218.4469	-789.7124142	69975.63479			-80511.61686
567		67131.32261	-36585.82311	-31638.07097			-28756.96674
568	Q_DELTA_DELTA_19	-36585.82311	92570.46738	-6784.280773			95241.89301
569		-31638.07097	-6784.280773	59558.14558			-9652.613676
570		42639.76962	-20606.62278	-24833.03024			-8392.332093
571	Q_DELTA_DELTA_20	-20606.62278	45278.29905	-733.8170423			-48544.82898
572		-24833.03024	-733.8170423	42807.52663			25786.35789
573		42639.76962	-20606.62278	-24833.03024			8392.332042
574	Q_DELTA_DELTA_21	-20606.62278	45278.29904	-733.8170424			48544.82904
575		-24833.03024	-733.8170419	42807.52663			-25786.35784
576		20127.25684	-13267.81426	-9838.854882			87287.09977
577	Q_DELTA_DELTA_22	-13267.81426	32646.26324	-943.8130419			40795.37583
578		-9838.854882	-943.8130419	16799.63235			-64377.87287
579		20127.25684	-13267.81426	-9838.854882			87287.09985
580	Q_DELTA_DELTA_23	-13267.81426	32646.26324	-943.8130418			40795.37576
581		-9838.854882	-943.8130419	16799.63235			-64377.8729
582		20127.25683	-13267.81426	-9838.854881			-87287.09984
583	Q_DELTA_DELTA_24	-13267.81426	32646.26324	-943.813043			-40795.37575
584		-9838.854881	-943.8130424	16799.63235			64377.87295

HİPOTEZ TESTLERİ						
L_İ	V	T_i	Ai_T * QΔΔi_-1 * Ai=A	Ti= A/(3*m0 2)	T_f	SONUÇ
1	0.15410504	12138.96668				
2	0.19723184	44856.51139	104842.5286	0.586351339	1.770883351	UYUŞUMLU
3	0.12982333	13443.6939				
4	1.14643422	38841.15746				
5	0.41740782	23119.44921	791238.1954	1.610804373	1.770883351	UYUŞUMLU
6	-0.03240662	26171.96417				
7	-1.92787149	63942.67738				
8	-1.0779927	13640.2084	413128.4429	1.163943036	1.770883351	UYUŞUMLU
9	0.93613068	46103.08501				
10	-0.14246791	12138.96674				
11	-0.17665189	44856.51143	104842.5287	0.58635134	1.770883351	UYUŞUMLU
12	-0.17162356	13443.69393				
13	-1.02243951	40082.93447				
14	-0.52518915	31033.36609	197498.2971	0.80476829	1.770883351	UYUŞUMLU
15	-1.08038674	48539.05003				
16	1.22843661	161411.8762				
17	0.46348162	4035.945268	294869.4494	0.98334082	1.770883351	UYUŞUMLU
18	0.14567946	133847.3553				
19	-0.11129854	89783.39366				
20	-0.33410897	91143.45762	461609.0266	1.230343345	1.770883351	UYUŞUMLU
21	1.14757757	138532.3454				
22	-0.08239172	515.3501195				
23	-0.11461948	29242.37055	17601.32163	0.240249127	1.770883351	UYUŞUMLU
24	-0.05649651	368.9202683				
25	0.59912387	49165.77246				
26	0.07132923	68060.09887	103906.4174	0.583727782	1.770883351	UYUŞUMLU
27	0.5539338	59415.57601				
28	-0.17026485	65798.75771				
29	-0.38240941	83122.3178	188782.809	0.786810959	1.770883351	UYUŞUMLU
30	0.40810189	94308.51269				
31	0.26030449	515.3491704				
32	0.25725242	29242.3703	17601.32184	0.240249128	1.770883351	UYUŞUMLU
33	0.16632505	368.91973				
34	0.08357233	74123.64115				
35	0.03054267	14033.18066	74137.3754	0.493069094	1.770883351	UYUŞUMLU
36	0.19888777	98125.42929				
37	-1.31865784	105904.5659				
38	-0.69716201	116.2061002	663213.624	1.474741487	1.770883351	UYUŞUMLU
39	0.21486215	100994.1603				
40	-0.23609416	39831.88071				
41	-0.15741936	32950.44135	278406.6817	0.95549629	1.770883351	UYUŞUMLU
42	-0.53401342	54836.86823				
43	-0.7487265	3409.250365				
44	-0.61679057	4989.314873	14420.0855	0.217456852	1.770883351	UYUŞUMLU
45	-0.83033855	7553.90102				
46	0.28825189	12738.49695				
47	0.02193778	13424.51498	72935.88651	0.489057374	1.770883351	UYUŞUMLU
48	0.7940033	46077.24272				
49	-0.52047461	27209.30912				
50	-0.14485279	24486.7425	265942.3937	0.933862561	1.770883351	UYUŞUMLU
51	-2.48633525	37286.02828				
52	0.75054149	109144.978				
53	0.53871002	5749.454534	270042.8689	0.941034476	1.770883351	UYUŞUMLU
54	0.16582437	66800.8175				
55	0.08879338	23369.82619				
56	0.61064779	90889.57078	99753.71094	0.571944264	1.770883351	UYUŞUMLU
57	0.09982766	7388.653733				
58	-0.69448789	5435.504896				
59	-1.0667284	32399.46454	80145.67312	0.512659747	1.770883351	UYUŞUMLU
60	-0.09191097	16734.00442				
61	0.02671873	5435.504864				
62	0.19262381	32399.46458	80145.6732	0.512659747	1.770883351	UYUŞUMLU
63	-0.13173863	16734.00439				
64	1.70085596	38841.15748				
65	0.84503343	23119.44919	791238.1957	1.610804374	1.770883351	UYUŞUMLU
66	-0.16447694	26171.96418				
67	0.90024233	38841.15751				
68	0.42904463	23119.44915	791238.1962	1.610804374	1.770883351	UYUŞUMLU
69	0.11166247	26171.96419				
70	-1.13539667	38841.1575				
71	-0.8046494	23119.44915	791238.1958	1.610804374	1.770883351	UYUŞUMLU
72	-0.36038956	26171.96421				

2-b)

Sonuç Denetimleri				
DN-BN	dxdia X,Y,Z	v = A * x - l (cm)	l_i + V_i (m)	X_BN - X_DN
	-3939.1327	0.154105045	-3939.131159	-3939.131159
63-64	3205.7534	0.197231838	3205.755372	3205.755372
	2170.7706	0.129823332	2170.771898	2170.771898
	-5185.7415	1.146434218	-5185.730036	-5185.730036
64-51	2131.7103	0.417407822	2131.714474	2131.714474
	4032.4205	-0.032406617	4032.420176	4032.420176
	4972.5996	-1.927871494	4972.580321	4972.580321
64-65	8569.9617	-1.077992696	8569.95092	8569.95092
	-9642.4821	0.936130683	-9642.472739	-9642.472739
	4472.6332	-0.142467913	4472.631775	4472.631775
63-75	2265.152	-0.176651885	2265.150233	2265.150233
	-5600.9311	-0.17162356	-5600.932816	-5600.932816
	3392.6228	-1.022439513	3392.612576	3392.612576
75-76	2596.9818	-0.525189153	2596.976548	2596.976548
	-5206.3477	-1.080386738	-5206.358504	-5206.358504
	-619.7746	1.228436613	-619.7623156	-619.7623156
75-41	7770.7473	0.463481619	7770.751935	7770.751935
	-3886.4651	0.145679464	-3886.463643	-3886.463643
	-3439.1815	-0.111298536	-3439.182613	-3439.182613
75-65	9510.5594	-0.334108973	9510.556059	9510.556059
	-1870.7795	1.147577575	-1870.768024	-1870.768024
	2495.5009	-0.082391719	2495.500076	2495.500076
76-43	1207.4084	-0.114619483	1207.407254	1207.407254
	-3503.2524	-0.056496509	-3503.252965	-3503.252965
	4012.3689	0.599123874	4012.374891	4012.374891
41-76	-5173.7761	0.071329227	-5173.775387	-5173.775387
	-1319.9004	0.553933798	-1319.894861	-1319.894861
	2819.422	-0.170264851	2819.420297	2819.420297
65-41	-1739.8003	-0.382409408	-1739.804124	-1739.804124
	-2015.6997	0.40810189	-2015.695619	-2015.695619
	5075.703	0.260304488	5075.705603	5075.705603
105-43	-6201.9855	0.257252417	-6201.982927	-6201.982927
	-1546.6628	0.166325054	-1546.661137	-1546.661137
	-1432.1702	0.083572333	-1432.169364	-1432.169364
105-41	-2235.6151	0.030542673	-2235.614795	-2235.614795
	3276.4847	0.198887766	3276.486689	3276.486689
	-3123.7484	-1.318657837	-3123.761587	-3123.761587
65-52	4747.8031	-0.697162008	4747.796128	4747.796128
	42.6965	0.214862154	42.69864862	42.69864862
	-381.6609	-0.236094158	-381.6632609	-381.6632609
105-46	4999.7902	-0.15741936	4999.788626	4999.788626
	-2524.8337	-0.534013423	-2524.83904	-2524.83904
	-6993.6805	-0.748726495	-6993.687987	-6993.687987
46-52	-747.797	-0.616790567	-747.8031679	-747.8031679
	7859.7283	-0.830338547	7859.719997	7859.719997
	-301.3012	0.28825189	-301.2983175	-301.2983175
52-86	6187.6865	0.021937778	6187.686719	6187.686719
	-3527.8693	0.794003298	-3527.86136	-3527.86136
	-7294.9811	-0.520474606	-7294.986305	-7294.986305
46-86	5439.885	-0.144852789	5439.883551	5439.883551
	4331.8835	-2.486335248	4331.858637	4331.858637
	4171.9319	0.75054149	4171.939405	4171.939405
87-52	-2155.7224	0.538710015	-2155.717013	-2155.717013
	-3197.6071	0.165824366	-3197.605442	-3197.605442
	3870.6402	0.08879338	3870.641088	3870.641088
87-86	4031.9636	0.610647793	4031.969706	4031.969706
	-6725.4678	0.009827665	-6725.466802	-6725.466802
	1132.3057	-0.694487888	1132.298755	1132.298755
87-92	7986.1178	-1.066728396	7986.107133	7986.107133
	-6264.5775	-0.001910969	-6264.578419	-6264.578419
	-2738.3426	0.026718732	-2738.342333	-2738.342333
86-92	3954.1355	0.192623811	3954.137426	3954.137426
	460.8897	-0.131738633	460.8883826	460.8883826
	5813.0467	1.700855963	5813.063709	5813.063709
88-87	1122.9059	0.845033433	1122.91435	1122.91435
	-6197.2178	-0.164476945	-6197.219445	-6197.219445
	20.2528	0.900242326	20.26180242	20.26180242
44-88	6801.8252	0.429044626	6801.82949	6801.82949
	-3913.6905	0.111662471	-3913.689383	-3913.689383
	2970.7275	-1.135396672	2970.716146	2970.716146
44-51	-5416.9977	-0.804649401	-5417.005746	-5417.005746
	323.6836	-0.360389562	323.6799961	323.6799961

	YAKLAŞIK KOORDİNATLAR KÜMESİ			DENGELİ KOORDİNATLAR			X = N_+ * A_T * P_II * l (cm)	
Nokta No	X(m)	Y(m)	Z(m)	X(m)	Y(m)	Z(m)	-2.117716865	Nokta No
41	4193056.61683	2408527.09372	4145751.05451	4193056.596	2408527.071	4145751.093	-2.308099137	41
43	4199564.48559	2404560.70884	4140927.92639	4199564.471	2404560.703	4140927.945	3.81877992	43
44	4177108.09868	2409245.64855	4161118.03008	4177108.149	2409245.644	4161118.001	-1.496984662	44
46	4194107.13526	2415762.47153	4139949.74623	4194107.102	2415762.474	4139949.767	-0.633389413	46
51	4180078.88759	2403828.65578	4161441.64517	4180078.865	2403828.638	4161441.681	1.84821721	51
52	4187113.38065	2415014.67796	4147809.53324	4187113.414	2415014.671	4147809.487	5.017250406	52
63	4189203.75959	2398491.15119	4155238.45123	4189203.726	2398491.168	4155238.489	-0.448639838	63
64	4185264.58470	2401696.89144	4157409.28722	4185264.595	2401696.924	4157409.261	-2.884469684	64
65	4190237.18310	2410266.86825	4147766.78159	4190237.175	2410266.875	4147766.788	-3.350383327	65
75	4193676.32080	2400756.34091	4149637.57413	4193676.358	2400756.319	4149637.556	0.252938786	75
76	4197068.96182	2403353.32126	4144431.19368	4197068.971	2403353.295	4144431.198	2.073878731	76
86	4186812.14906	2421202.37022	4144281.60696	4186812.115	2421202.358	4144281.626	-2.259146278	86
87	4182941.49725	2417170.42456	4151007.06161	4182941.474	2417170.388	4151007.092	-1.746289249	87
88	4177128.38751	2416047.42492	4157204.33963	4177128.411	2416047.474	4157204.312	3.606140755	88
92	4184073.76554	2425156.48130	4144742.53727	4184073.773	2425156.495	4144742.514	3.311890149	92
105	4194488.74538	2410762.65062	4142474.64760	4194488.765	2410762.685	4142474.606	-0.70685176	105
							-4.627459778	
				STANDART SAPMA			-3.339685538	
				6874.675652	7760.674404	7043.632787	1.728071094	
							3.792724055	
							1.033419498	
							3.240302952	
							-2.616452618	
							-0.774451998	
							0.651310266	
							0.672678067	
							3.716846553	
							-2.220580759	
							-1.778899536	
							0.872407042	
							-2.600769944	
							0.415713732	
							-3.360857963	
							-1.260913974	
							1.864543499	
							-2.288651325	
							-3.665561794	
							3.079715814	
							2.314492734	
							4.863404779	
							-2.777807203	
							0.757860784	
							1.373709819	
							-2.328195154	
							1.963710799	
							3.48135817	
							-4.159107809	

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