

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
0	317,799.69	2,313,666.95	271.76	0.00
1	317,637.64	2,313,671.94	274.24	162.12
2	317,416.75	2,313,697.94	277.90	384.54
3	317,149.59	2,313,740.66	278.84	655.10
4	316,613.21	2,313,821.68	278.44	1,197.55
5	316,110.54	2,313,894.88	276.93	1,705.53
6	315,993.84	2,313,906.26	276.63	1,822.78
7	315,421.73	2,313,983.45	293.69	2,400.07
8	315,387.94	2,314,011.49	330.69	2,443.98
9	315,385.16	2,314,030.53	1.00	2,463.23
10	315,424.46	2,314,246.38	357.95	2,682.62
11	315,419.01	2,314,267.54	330.54	2,704.48
12	315,403.70	2,314,283.12	309.01	2,726.32
13	315,345.41	2,314,320.30	307.23	2,795.45
14	315,307.94	2,314,353.95	313.27	2,845.82
15	315,274.85	2,314,386.60	321.15	2,892.30
16	315,202.69	2,314,500.67	325.21	3,027.28
17	315,172.06	2,314,540.93	305.24	3,077.87
18	315,143.26	2,314,550.14	289.46	3,108.11
19	314,558.24	2,314,776.86	291.27	3,735.53
20	313,404.85	2,315,227.84	292.97	4,973.95
21	313,296.93	2,315,277.21	302.52	5,092.62
22	313,252.63	2,315,314.99	310.91	5,150.84
23	313,198.91	2,315,362.29	309.37	5,222.42
24	313,165.75	2,315,387.63	301.01	5,264.16
25	312,553.22	2,315,668.57	246.17	5,938.04
26	312,542.69	2,315,635.58	203.79	5,972.68
27	312,532.17	2,315,617.26	225.18	5,993.80
28	312,516.71	2,315,608.51	250.74	6,011.56
29	312,467.43	2,315,600.70	267.16	6,061.45
30	312,428.46	2,315,602.97	284.96	6,100.49
31	312,298.93	2,315,667.84	297.50	6,245.36
32	312,127.99	2,315,760.23	296.51	6,439.67
33	311,598.91	2,316,002.72	300.06	7,021.68
34	311,557.52	2,316,032.24	300.67	7,072.51
35	311,447.63	2,316,085.47	293.60	7,194.62
36	311,120.80	2,316,213.24	292.46	7,545.53
37	310,697.91	2,316,397.67	295.04	8,006.89
38	309,978.43	2,316,756.78	261.46	8,811.01
39	309,897.30	2,316,679.49	234.68	8,923.07
40	309,746.74	2,316,602.65	256.33	9,092.09
41	309,561.18	2,316,601.68	277.79	9,277.66
42	309,312.85	2,316,672.34	285.57	9,535.85
43	309,038.57	2,316,747.17	279.96	9,820.15
44	308,756.68	2,316,770.11	275.89	10,102.98
45	308,563.14	2,316,794.34	279.29	10,298.02
46	308,360.06	2,316,835.48	278.68	10,505.23
47	308,137.57	2,316,858.52	253.67	10,728.91
48	308,079.50	2,316,812.21	245.36	10,803.19
49	308,028.76	2,316,802.61	251.38	10,854.82
50	307,938.80	2,316,757.70	256.14	10,955.37
51	307,575.66	2,316,750.18	266.08	11,318.59

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
52	307,492.83	2,316,740.52	274.38	11,401.98
53	307,373.77	2,316,773.31	272.18	11,525.47
54	307,131.68	2,316,726.13	258.78	11,772.11
55	306,502.12	2,316,599.11	254.12	12,414.36
56	306,447.57	2,316,578.88	246.47	12,472.54
57	306,409.45	2,316,559.70	238.83	12,515.22
58	306,364.59	2,316,527.55	232.71	12,570.41
59	305,898.00	2,316,150.29	235.44	13,170.43
60	305,827.31	2,316,109.21	249.94	13,252.19
61	305,768.65	2,316,098.91	274.24	13,311.75
62	305,697.55	2,316,122.62	291.55	13,386.69
63	305,643.63	2,316,147.38	304.23	13,446.04
64	305,304.28	2,316,472.66	308.16	13,916.10
65	305,268.88	2,316,495.23	296.27	13,958.08
66	305,217.60	2,316,513.93	284.38	14,012.67
67	304,815.23	2,316,575.70	274.56	14,419.75
68	304,763.70	2,316,576.05	264.55	14,471.29
69	304,708.26	2,316,564.99	251.35	14,527.81
70	304,450.64	2,316,439.24	244.64	14,814.48
71	304,321.87	2,316,379.99	250.64	14,956.23
72	303,819.74	2,316,254.76	248.39	15,473.75
73	303,715.84	2,316,196.64	252.61	15,592.80
74	303,542.52	2,316,179.75	259.18	15,766.94
75	303,461.05	2,316,156.27	261.00	15,851.73
76	303,084.76	2,316,143.65	264.83	16,228.22
77	302,940.32	2,316,122.26	261.57	16,374.24
78	301,181.30	2,315,861.23	261.66	18,152.52
79	300,763.37	2,315,800.75	260.51	18,574.81
80	300,721.21	2,315,792.75	264.89	18,617.72
81	300,687.81	2,315,793.05	274.64	18,651.12
82	300,652.48	2,315,798.50	282.80	18,686.87
83	300,610.14	2,315,811.31	292.44	18,731.10
84	299,801.38	2,316,242.29	293.38	19,647.53
85	299,756.50	2,316,257.50	282.26	19,694.91
86	299,708.56	2,316,262.37	270.98	19,743.10
87	299,438.74	2,316,244.17	263.72	20,013.53
88	299,368.43	2,316,233.42	253.48	20,084.66
89	299,281.77	2,316,194.20	236.65	20,179.78
90	298,851.65	2,315,802.05	227.40	20,761.84
91	298,530.10	2,315,503.87	228.32	21,200.36
92	298,424.57	2,315,413.67	228.29	21,339.19
93	298,300.74	2,315,298.64	231.33	21,508.20
94	298,264.94	2,315,274.08	242.74	21,551.62
95	298,234.70	2,315,263.04	252.32	21,583.82
96	297,928.56	2,315,179.37	248.19	21,901.18
97	297,875.42	2,315,150.71	234.76	21,961.55
98	297,835.67	2,315,114.74	219.36	22,015.16
99	297,726.23	2,314,931.56	216.76	22,228.54
100	297,692.63	2,314,895.09	229.91	22,278.14
101	297,646.26	2,314,865.16	244.91	22,333.33
102	297,594.74	2,314,849.08	255.90	22,387.30
103	297,420.18	2,314,815.60	259.27	22,565.04

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
104	297,344.81	2,314,801.48	259.39	22,641.72
105	297,304.48	2,314,793.93	270.34	22,682.76
106	297,256.32	2,314,803.54	287.34	22,731.86
107	297,205.99	2,314,825.32	301.72	22,786.70
108	297,178.33	2,314,848.56	308.65	22,822.83
109	297,030.03	2,314,961.36	303.41	23,009.15
110	297,008.74	2,314,973.43	291.80	23,033.63
111	296,866.99	2,315,008.87	280.78	23,179.74
112	296,799.08	2,315,017.84	267.50	23,248.24
113	296,748.10	2,315,006.52	252.65	23,300.46
114	296,704.88	2,314,988.90	241.20	23,347.14
115	296,616.72	2,314,926.17	238.82	23,455.34
116	296,542.27	2,314,888.35	249.00	23,538.84
117	296,486.43	2,314,873.33	267.54	23,596.67
118	296,411.44	2,314,886.75	287.61	23,672.85
119	296,367.36	2,314,907.37	299.79	23,721.51
120	296,193.86	2,315,026.64	298.63	23,932.06
121	296,155.02	2,315,042.93	284.01	23,974.17
122	296,102.45	2,315,047.77	266.70	24,026.97
123	295,159.21	2,314,849.53	264.56	24,990.81
124	295,110.39	2,314,850.37	313.02	25,039.64
125	295,097.66	2,314,997.72	3.28	25,187.53
126	295,132.92	2,315,171.08	12.49	25,364.44
127	295,170.31	2,315,327.06	7.10	25,524.84
128	295,170.93	2,315,375.73	354.83	25,573.52
129	295,150.69	2,315,479.24	354.70	25,678.99
130	295,150.98	2,315,514.50	14.36	25,714.25
131	295,169.23	2,315,548.45	34.71	25,752.79
132	295,197.67	2,315,581.00	20.09	25,796.02
133	295,196.82	2,315,631.74	351.08	25,846.77
134	295,187.63	2,315,662.05	358.18	25,878.43
135	295,194.87	2,315,692.83	16.44	25,910.05
136	295,203.45	2,315,716.87	17.80	25,935.58
137	295,209.98	2,315,739.69	340.68	25,959.32
138	295,184.40	2,315,757.87	301.23	25,990.69
139	295,150.70	2,315,775.08	300.23	26,028.54
140	294,988.41	2,315,882.13	323.49	26,222.96
141	294,979.34	2,315,912.85	346.44	26,254.99
142	294,974.50	2,315,938.54	325.13	26,281.13
143	294,935.10	2,315,962.16	289.60	26,327.07
144	294,799.09	2,315,981.88	277.16	26,464.50
145	294,781.49	2,315,983.75	261.42	26,482.20
146	294,734.03	2,315,963.38	254.68	26,533.85
147	294,692.59	2,315,957.99	270.31	26,575.64
148	294,660.45	2,315,962.53	293.31	26,608.10
149	294,581.84	2,316,025.23	321.48	26,708.65
150	294,560.91	2,316,068.88	335.08	26,757.06
151	294,552.27	2,316,088.09	326.96	26,778.12
152	294,519.49	2,316,124.68	329.43	26,827.25
153	294,504.47	2,316,167.63	332.95	26,872.76
154	294,484.90	2,316,195.76	321.77	26,907.02
155	294,456.73	2,316,227.44	318.61	26,949.41

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
156	294,414.15	2,316,276.18	322.04	27,014.13
157	294,382.58	2,316,321.63	341.23	27,069.47
158	294,381.50	2,316,344.17	354.09	27,092.03
159	294,371.86	2,316,404.59	326.34	27,153.22
160	294,321.81	2,316,435.56	304.74	27,212.08
161	294,298.11	2,316,453.90	300.03	27,242.04
162	294,273.16	2,316,464.14	291.13	27,269.01
163	294,236.47	2,316,477.46	281.21	27,308.04
164	294,157.89	2,316,480.85	271.00	27,386.70
165	294,137.21	2,316,480.68	287.06	27,407.38
166	294,086.47	2,316,515.66	305.23	27,469.01
167	294,046.85	2,316,544.31	292.22	27,517.89
168	293,888.96	2,316,568.13	277.87	27,677.57
169	293,745.17	2,316,586.19	282.58	27,822.49
170	293,698.78	2,316,601.27	291.56	27,871.27
171	293,662.58	2,316,618.24	287.72	27,911.25
172	293,577.81	2,316,633.68	242.96	27,997.42
173	293,538.47	2,316,551.57	200.68	28,088.47
174	293,517.83	2,316,478.49	212.84	28,164.41
175	293,480.83	2,316,447.35	215.21	28,212.77
176	293,430.11	2,316,311.68	211.90	28,357.62
177	293,391.53	2,316,270.73	238.71	28,413.87
178	293,296.27	2,316,243.64	256.01	28,512.92
179	293,253.91	2,316,234.56	242.43	28,556.24
180	293,196.33	2,316,180.79	238.69	28,635.01
181	293,143.78	2,316,162.11	255.16	28,690.79
182	293,079.12	2,316,150.59	268.75	28,756.46
183	293,015.22	2,316,159.11	282.75	28,820.93
184	292,896.75	2,316,197.39	291.01	28,945.43
185	292,858.16	2,316,214.67	301.74	28,987.72
186	292,834.31	2,316,234.24	308.09	29,018.57
187	292,787.96	2,316,268.91	320.37	29,076.45
188	292,778.71	2,316,287.83	317.95	29,097.51
189	292,732.69	2,316,316.54	306.55	29,151.75
190	292,708.15	2,316,337.99	305.70	29,184.34
191	292,662.61	2,316,364.55	304.73	29,237.06
192	292,566.48	2,316,442.97	309.02	29,361.12
193	292,531.36	2,316,471.24	324.78	29,406.20
194	292,518.79	2,316,507.19	332.31	29,444.29
195	292,506.06	2,316,524.65	310.01	29,465.90
196	292,491.00	2,316,532.04	291.20	29,482.67
197	292,423.58	2,316,551.69	277.54	29,552.90
198	292,393.92	2,316,551.09	284.09	29,582.57
199	292,287.94	2,316,610.69	312.79	29,704.16
200	292,260.66	2,316,651.47	312.12	29,753.22
201	292,221.12	2,316,672.52	302.70	29,798.01
202	292,185.17	2,316,699.97	292.49	29,843.24
203	292,170.55	2,316,701.93	246.50	29,858.00
204	292,121.31	2,316,632.60	230.42	29,943.03
205	292,039.77	2,316,595.37	247.51	30,032.67
206	291,987.30	2,316,575.82	273.40	30,088.66
207	291,973.92	2,316,582.71	315.93	30,103.71

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
208	291,929.85	2,316,675.64	318.55	30,206.56
209	291,856.57	2,316,722.29	292.44	30,293.43
210	291,786.01	2,316,737.79	255.13	30,365.67
211	291,700.88	2,316,660.81	266.46	30,480.44
212	291,581.11	2,316,744.79	293.73	30,626.72
213	291,512.90	2,316,759.81	286.42	30,696.57
214	291,442.01	2,316,786.20	271.67	30,772.21
215	291,372.08	2,316,764.72	281.42	30,845.36
216	291,327.59	2,316,801.93	323.59	30,903.36
217	291,288.24	2,316,895.84	325.06	31,005.18
218	291,251.22	2,316,930.20	290.56	31,055.69
219	291,186.18	2,316,928.21	255.33	31,120.76
220	291,112.18	2,316,889.55	225.02	31,204.24
221	291,091.61	2,316,850.24	272.06	31,248.62
222	291,069.36	2,316,901.42	329.15	31,304.43
223	291,024.44	2,316,958.48	304.42	31,377.04
224	290,976.37	2,316,973.22	274.17	31,427.33
225	290,925.03	2,316,965.35	296.58	31,479.26
226	290,908.34	2,316,996.58	344.19	31,514.67
227	290,903.68	2,317,072.90	340.19	31,591.14
228	290,865.96	2,317,124.58	302.16	31,655.11
229	290,791.11	2,317,138.38	276.87	31,731.23
230	290,704.05	2,317,143.40	284.90	31,818.44
231	290,634.23	2,317,178.21	310.36	31,896.45
232	290,589.75	2,317,239.93	324.10	31,972.53
233	290,563.49	2,317,276.05	337.27	32,017.19
234	290,554.87	2,317,327.88	334.27	32,069.73
235	290,511.01	2,317,376.55	309.44	32,135.25
236	290,465.94	2,317,403.53	298.43	32,187.78
237	290,420.99	2,317,425.41	302.27	32,237.77
238	290,380.35	2,317,457.84	302.28	32,289.76
239	290,327.32	2,317,483.68	278.42	32,348.75
240	290,299.10	2,317,479.14	256.37	32,377.34
241	290,263.46	2,317,467.47	230.29	32,414.84
242	290,249.84	2,317,442.60	205.05	32,443.19
243	290,231.56	2,317,395.94	220.24	32,493.31
244	290,202.98	2,317,378.83	243.26	32,526.62
245	290,137.39	2,317,351.56	236.16	32,597.65
246	290,107.75	2,317,321.80	225.48	32,639.65
247	290,080.79	2,317,295.83	220.89	32,677.09
248	290,045.38	2,317,246.56	230.96	32,737.75
249	289,978.86	2,317,217.26	256.24	32,810.45
250	289,910.03	2,317,212.76	274.02	32,879.43
251	289,810.17	2,317,233.58	264.36	32,981.44
252	289,755.36	2,317,210.26	273.33	33,041.00
253	289,703.62	2,317,239.78	302.57	33,100.57
254	289,616.78	2,317,301.59	305.18	33,207.16
255	289,369.68	2,317,474.11	308.35	33,508.52
256	289,295.93	2,317,539.98	305.21	33,607.40
257	289,217.55	2,317,582.81	294.06	33,696.73
258	289,182.91	2,317,595.05	282.57	33,733.46
259	289,131.48	2,317,600.15	281.54	33,785.15

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
260	289,086.15	2,317,614.38	277.07	33,832.66
261	289,041.83	2,317,611.84	266.87	33,877.06
262	288,880.77	2,317,603.43	269.99	34,038.33
263	288,809.38	2,317,607.14	274.85	34,109.82
264	288,768.68	2,317,611.94	268.75	34,150.80
265	288,710.38	2,317,602.48	267.33	34,209.86
266	288,655.53	2,317,606.21	277.65	34,264.84
267	288,559.41	2,317,625.63	282.15	34,362.90
268	288,329.61	2,317,678.21	281.70	34,598.64
269	288,251.86	2,317,692.65	285.91	34,677.71
270	288,191.90	2,317,716.02	283.46	34,742.08
271	288,127.20	2,317,722.39	276.61	34,807.09
272	288,086.81	2,317,727.77	276.87	34,847.83
273	287,906.09	2,317,747.24	277.06	35,029.59
274	287,829.17	2,317,758.02	276.13	35,107.27
275	287,750.25	2,317,763.92	274.19	35,186.41
276	287,648.23	2,317,771.26	275.17	35,288.69
277	287,603.16	2,317,776.17	286.85	35,334.03
278	287,520.86	2,317,818.96	298.31	35,426.79
279	287,476.04	2,317,843.96	279.84	35,478.11
280	287,155.91	2,317,790.56	267.30	35,802.66
281	287,106.86	2,317,794.04	272.40	35,851.83
282	287,043.43	2,317,794.86	263.75	35,915.28
283	286,974.03	2,317,778.54	222.21	35,986.56
284	286,963.07	2,317,697.06	182.11	36,068.78
285	286,968.70	2,317,603.71	174.29	36,162.30
286	286,983.36	2,317,498.85	164.53	36,268.17
287	287,016.59	2,317,420.50	171.71	36,353.28
288	287,009.81	2,317,360.02	186.01	36,414.14
289	286,991.42	2,317,173.19	194.20	36,601.87
290	286,966.39	2,317,113.57	191.70	36,666.54
291	286,966.31	2,317,106.89	173.07	36,673.22
292	286,989.99	2,317,015.18	169.94	36,767.94
293	287,000.14	2,316,912.40	180.93	36,871.22
294	286,976.06	2,316,729.33	188.79	37,055.86
295	286,952.85	2,316,598.87	204.04	37,188.37
296	286,892.07	2,316,521.05	239.35	37,287.11
297	286,854.24	2,316,514.86	214.86	37,325.45
298	286,868.74	2,316,440.14	189.02	37,401.56
299	286,850.03	2,316,406.43	205.09	37,440.12
300	286,844.00	2,316,390.85	193.05	37,456.83
301	286,838.78	2,316,330.70	185.34	37,517.20
302	286,831.67	2,316,259.85	179.02	37,588.41
303	286,833.63	2,316,245.36	194.56	37,603.02
304	286,805.69	2,316,208.03	223.07	37,649.65
305	286,746.12	2,316,156.86	224.88	37,728.18
306	286,718.62	2,316,124.57	226.76	37,770.60
307	286,694.71	2,316,106.62	236.40	37,800.50
308	286,672.43	2,316,093.61	240.19	37,826.30
309	286,656.25	2,316,084.52	241.69	37,844.86
310	286,619.88	2,316,065.76	228.21	37,885.78
311	286,595.18	2,316,028.72	213.23	37,930.29

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
312	286,593.12	2,316,025.52	223.94	37,934.10
313	286,567.71	2,316,007.81	245.05	37,965.07
314	286,508.36	2,315,991.89	238.84	38,026.52
315	286,493.31	2,315,975.57	227.05	38,048.72
316	286,385.11	2,315,889.23	230.04	38,187.15
317	286,296.70	2,315,811.47	233.70	38,304.89
318	286,228.05	2,315,769.77	239.24	38,385.21
319	286,063.98	2,315,674.10	237.32	38,575.14
320	285,934.97	2,315,583.42	237.71	38,732.82
321	285,867.71	2,315,545.41	230.72	38,810.09
322	285,816.63	2,315,486.45	227.66	38,888.09
323	285,780.98	2,315,460.95	215.35	38,931.92
324	285,772.53	2,315,432.04	194.86	38,962.05
325	285,761.04	2,315,383.91	192.25	39,011.52
326	285,751.24	2,315,333.85	219.22	39,062.53
327	285,713.73	2,315,318.21	254.68	39,103.18
328	285,661.69	2,315,310.89	260.93	39,155.73
329	285,619.46	2,315,303.35	250.32	39,198.63
330	285,532.59	2,315,254.74	224.07	39,298.17
331	285,505.99	2,315,203.33	192.03	39,356.05
332	285,508.57	2,315,158.53	185.01	39,400.93
333	285,494.14	2,315,097.56	203.03	39,463.59
334	285,465.04	2,315,052.31	188.97	39,517.39
335	285,471.90	2,315,026.33	155.69	39,544.25
336	285,490.51	2,314,998.57	133.45	39,577.67
337	285,525.79	2,314,977.60	118.52	39,618.72
338	285,598.95	2,314,941.41	124.41	39,700.34
339	285,647.24	2,314,897.17	125.95	39,765.83
340	285,696.71	2,314,869.29	116.94	39,822.62
341	285,721.04	2,314,858.21	142.33	39,849.35
342	285,740.99	2,314,743.07	181.76	39,966.20
343	285,722.63	2,314,665.74	196.10	40,045.68
344	285,704.62	2,314,612.96	162.21	40,101.45
345	285,739.54	2,314,587.98	123.18	40,144.39
346	285,766.74	2,314,571.79	140.22	40,176.04
347	285,777.88	2,314,541.73	157.05	40,208.09
348	285,782.91	2,314,531.21	179.78	40,219.75
349	285,761.74	2,314,486.08	202.02	40,269.60
350	285,752.47	2,314,459.02	198.20	40,298.21
351	285,739.34	2,314,417.35	195.91	40,341.89
352	285,724.64	2,314,359.85	195.74	40,401.25
353	285,709.27	2,314,309.97	185.74	40,453.44
354	285,711.42	2,314,288.26	172.45	40,475.26
355	285,714.80	2,314,267.92	158.01	40,495.88
356	285,729.92	2,314,245.94	168.51	40,522.55
357	285,721.70	2,314,205.66	205.12	40,563.67
358	285,635.79	2,314,098.39	226.28	40,701.10
359	285,592.53	2,314,066.82	238.70	40,754.65
360	285,540.82	2,314,041.06	253.49	40,812.42
361	285,355.46	2,314,019.84	263.13	40,998.99
362	285,286.70	2,314,011.15	262.55	41,068.30
363	285,212.75	2,314,001.14	271.45	41,142.92

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
364	285,137.15	2,314,015.30	262.62	41,219.84
365	285,069.25	2,313,983.12	238.10	41,294.98
366	284,976.61	2,313,909.61	234.38	41,413.25
367	284,810.54	2,313,802.55	250.89	41,610.83
368	284,655.82	2,313,787.92	247.57	41,766.24
369	284,562.27	2,313,710.91	233.34	41,887.41
370	284,379.20	2,313,588.05	240.42	42,107.88
371	284,241.87	2,313,523.13	254.13	42,259.79
372	284,115.73	2,313,508.90	272.31	42,386.73
373	283,941.66	2,313,542.89	275.87	42,564.08
374	283,902.87	2,313,543.35	239.07	42,602.87
375	283,855.66	2,313,452.50	212.94	42,705.26
376	283,799.04	2,313,381.11	216.69	42,796.38
377	283,761.92	2,313,328.04	204.01	42,861.15
378	283,736.41	2,313,218.03	215.38	42,974.07
379	283,694.86	2,313,191.77	254.52	43,023.22
380	283,644.50	2,313,192.95	269.63	43,073.60
381	283,406.13	2,313,184.27	267.56	43,312.12
382	283,108.96	2,313,169.76	272.16	43,609.65
383	283,018.34	2,313,181.08	272.21	43,700.98
384	282,841.04	2,313,172.71	269.08	43,878.47
385	282,836.51	2,313,172.78	270.61	43,883.00
386	282,709.11	2,313,173.56	280.15	44,010.41
387	282,602.47	2,313,212.26	272.76	44,123.84
388	282,443.37	2,313,171.30	253.40	44,288.14
389	281,776.84	2,312,944.84	252.67	44,992.08
390	281,297.38	2,312,808.40	248.08	45,490.58
391	281,224.26	2,312,769.60	246.19	45,573.36
392	280,719.75	2,312,589.38	245.11	46,109.10
393	280,651.60	2,312,549.85	232.31	46,187.88
394	280,572.94	2,312,470.47	234.12	46,299.63
395	280,491.05	2,312,429.66	249.07	46,391.13
396	280,382.25	2,312,399.75	252.38	46,503.96
397	280,259.74	2,312,355.49	248.35	46,634.22
398	280,200.07	2,312,329.63	260.35	46,699.25
399	280,145.62	2,312,333.56	278.99	46,753.84
400	280,076.48	2,312,350.62	279.63	46,825.06
401	279,967.81	2,312,360.91	277.41	46,934.21
402	279,924.32	2,312,368.12	270.51	46,978.29
403	279,865.16	2,312,359.38	263.87	47,038.10
404	279,805.61	2,312,355.37	259.28	47,097.78
405	279,747.76	2,312,337.03	243.42	47,158.47
406	279,711.29	2,312,310.95	229.91	47,203.31
407	279,643.38	2,312,243.95	227.42	47,298.71
408	279,560.68	2,312,173.19	237.48	47,407.55
409	279,345.95	2,312,075.38	250.03	47,643.50
410	279,242.09	2,312,046.69	260.23	47,751.25
411	279,167.88	2,312,041.38	276.46	47,825.66
412	279,046.12	2,312,078.63	280.35	47,952.98
413	278,938.98	2,312,085.55	272.13	48,060.34
414	278,843.43	2,312,086.49	258.09	48,155.90
415	278,752.93	2,312,045.46	241.60	48,255.27

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
416	278,650.18	2,311,980.21	235.70	48,376.98
417	278,569.50	2,311,921.19	228.42	48,476.95
418	278,478.47	2,311,823.64	228.73	48,610.37
419	278,436.01	2,311,793.28	238.82	48,662.57
420	278,327.57	2,311,738.51	248.46	48,784.06
421	278,082.67	2,311,666.94	257.87	49,039.20
422	278,034.45	2,311,660.20	268.33	49,087.89
423	277,959.57	2,311,666.25	263.04	49,163.02
424	277,674.10	2,311,570.55	253.50	49,464.11
425	277,475.95	2,311,519.43	255.79	49,668.74
426	277,335.31	2,311,484.46	268.59	49,813.66
427	277,178.84	2,311,515.31	273.13	49,973.15
428	276,988.14	2,311,498.95	270.65	50,164.54
429	276,899.79	2,311,508.54	260.15	50,253.41
430	276,778.72	2,311,449.78	239.95	50,388.00
431	276,663.71	2,311,371.57	236.64	50,527.07
432	276,577.18	2,311,316.44	256.76	50,629.67
433	276,507.68	2,311,323.77	288.35	50,699.56
434	276,431.12	2,311,369.20	309.11	50,788.59
435	276,383.82	2,311,420.87	304.06	50,858.63
436	275,969.75	2,311,576.49	308.73	51,300.98
437	275,946.18	2,311,612.60	331.00	51,344.10
438	275,913.98	2,311,682.09	320.74	51,420.69
439	275,839.61	2,311,736.81	311.18	51,513.03
440	275,803.72	2,311,774.01	293.56	51,564.72
441	275,774.35	2,311,774.57	283.25	51,594.09
442	275,734.30	2,311,793.58	305.58	51,638.42
443	275,716.23	2,311,812.14	294.37	51,664.32
444	275,665.34	2,311,814.79	279.53	51,715.28
445	275,552.66	2,311,847.29	274.64	51,832.56
446	275,492.73	2,311,840.14	259.70	51,892.92
447	275,444.34	2,311,828.25	250.72	51,942.75
448	275,336.23	2,311,778.38	241.05	52,061.80
449	275,275.87	2,311,738.98	238.21	52,133.88
450	275,211.35	2,311,701.06	252.11	52,208.72
451	275,014.00	2,311,682.67	270.88	52,406.93
452	274,853.79	2,311,702.56	281.29	52,568.37
453	274,770.13	2,311,725.77	280.22	52,655.19
454	274,685.53	2,311,733.07	276.30	52,740.10
455	274,624.27	2,311,741.32	274.72	52,801.92
456	274,555.54	2,311,743.44	276.63	52,870.68
457	274,470.93	2,311,760.66	290.24	52,957.02
458	274,325.83	2,311,840.99	297.32	53,122.87
459	274,214.52	2,311,894.49	293.19	53,246.37
460	274,056.07	2,311,954.37	283.57	53,415.75
461	273,990.11	2,311,961.82	277.60	53,482.14
462	273,925.50	2,311,971.76	281.72	53,547.51
463	273,879.08	2,311,983.93	273.95	53,595.50
464	273,816.92	2,311,976.54	257.89	53,658.10
465	273,748.69	2,311,955.11	259.75	53,729.61
466	273,693.39	2,311,952.15	266.33	53,784.99
467	273,658.26	2,311,949.52	256.52	53,820.22

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
468	273,639.36	2,311,941.62	265.54	53,840.71
469	273,627.03	2,311,944.64	299.26	53,853.40
470	273,601.37	2,311,970.08	318.71	53,889.53
471	273,506.83	2,312,094.04	316.10	54,045.43
472	273,476.09	2,312,119.41	308.48	54,085.28
473	273,432.33	2,312,152.91	301.40	54,140.40
474	273,326.03	2,312,203.31	273.48	54,258.04
475	273,285.24	2,312,189.74	249.12	54,301.02
476	273,218.56	2,312,160.96	252.00	54,373.65
477	273,151.75	2,312,145.95	265.06	54,442.13
478	273,052.96	2,312,150.75	279.42	54,541.03
479	273,006.20	2,312,164.20	278.42	54,589.69
480	272,774.60	2,312,167.38	272.12	54,821.31
481	272,511.57	2,312,183.27	268.66	55,084.83
482	272,448.56	2,312,176.50	262.09	55,148.20
483	271,980.16	2,312,096.43	271.32	55,623.39
484	271,879.02	2,312,118.57	284.11	55,726.93
485	271,748.37	2,312,155.71	283.58	55,862.75
486	271,618.94	2,312,181.54	285.19	55,994.73
487	271,544.36	2,312,207.35	298.12	56,073.65
488	271,481.24	2,312,255.18	324.63	56,152.85
489	271,442.29	2,312,375.82	337.54	56,279.62
490	271,430.08	2,312,399.75	312.75	56,306.49
491	271,405.49	2,312,409.96	301.34	56,333.12
492	271,378.26	2,312,432.92	302.09	56,368.74
493	271,222.72	2,312,502.30	292.61	56,539.05
494	271,114.82	2,312,544.12	293.89	56,654.76
495	271,036.72	2,312,583.21	288.09	56,742.11
496	270,975.73	2,312,593.52	275.19	56,803.96
497	270,939.56	2,312,594.02	280.16	56,840.13
498	270,867.71	2,312,619.51	328.74	56,916.37
499	270,879.44	2,312,703.66	327.63	57,001.33
500	270,718.28	2,312,753.94	288.28	57,170.16
501	270,627.92	2,312,785.46	294.34	57,265.84
502	270,543.41	2,312,833.17	302.21	57,362.90
503	270,457.72	2,312,893.09	312.07	57,467.46
504	270,270.28	2,313,110.14	311.66	57,754.24
505	270,212.90	2,313,149.02	300.20	57,823.56
506	270,140.85	2,313,184.59	292.96	57,903.91
507	269,845.75	2,313,289.94	292.63	58,217.25
508	269,699.49	2,313,360.07	297.54	58,379.45
509	269,532.93	2,313,454.18	302.96	58,570.75
510	269,365.80	2,313,577.63	306.49	58,778.54
511	269,258.14	2,313,657.37	323.07	58,912.51
512	269,233.11	2,313,724.75	346.89	58,984.39
513	269,220.71	2,313,845.94	10.93	59,106.22
514	269,290.82	2,313,979.46	21.90	59,257.02
515	269,337.08	2,314,139.81	359.55	59,423.91
516	269,303.03	2,314,251.15	329.68	59,540.34
517	269,204.24	2,314,354.76	315.86	59,683.50
518	269,065.89	2,314,494.84	320.49	59,880.38
519	268,999.76	2,314,591.49	338.39	59,997.49

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
520	268,988.14	2,314,666.27	351.71	60,073.17
521	268,961.85	2,314,859.41	328.99	60,268.09
522	268,940.38	2,314,874.85	299.69	60,294.53
523	268,869.46	2,314,905.93	293.59	60,371.96
524	268,646.12	2,315,003.15	296.12	60,615.54
525	268,560.20	2,315,050.24	306.35	60,713.52
526	268,467.39	2,315,139.82	317.53	60,842.52
527	268,400.14	2,315,223.08	323.00	60,949.54
528	268,356.29	2,315,285.55	324.60	61,025.87
529	268,344.50	2,315,301.94	339.03	61,046.06
530	268,337.33	2,315,367.77	344.88	61,112.28
531	268,329.19	2,315,386.03	324.02	61,132.26
532	268,308.81	2,315,404.42	303.40	61,159.72
533	268,262.26	2,315,425.86	306.36	61,210.96
534	268,189.19	2,315,507.02	311.52	61,320.17
535	268,137.46	2,315,543.28	305.54	61,383.34
536	268,113.72	2,315,560.56	312.32	61,412.71
537	268,105.80	2,315,569.54	308.49	61,424.68
538	268,081.28	2,315,582.80	292.23	61,452.55
539	267,990.93	2,315,608.83	282.91	61,546.58
540	267,906.14	2,315,623.39	275.26	61,632.61
541	267,861.90	2,315,623.99	268.12	61,676.85
542	267,793.04	2,315,618.53	265.07	61,745.93
543	267,748.28	2,315,614.35	263.83	61,790.89
544	267,536.61	2,315,588.35	265.39	62,004.15
545	267,413.24	2,315,583.56	268.39	62,127.61
546	267,358.81	2,315,582.62	276.93	62,182.04
547	267,251.76	2,315,610.99	286.41	62,292.80
548	267,067.79	2,315,670.71	291.13	62,486.22
549	266,877.39	2,315,756.55	304.48	62,695.06
550	266,759.41	2,315,873.27	322.29	62,861.03
551	266,733.05	2,315,918.70	319.66	62,913.55
552	266,686.82	2,315,956.73	314.68	62,973.42
553	266,672.49	2,315,973.75	356.50	62,995.67
554	266,771.09	2,316,125.17	11.24	63,176.36
555	266,768.22	2,316,140.52	343.08	63,191.97
556	266,758.75	2,316,162.57	332.52	63,215.97
557	266,679.91	2,316,290.14	321.94	63,365.94
558	266,630.25	2,316,340.84	311.23	63,436.91
559	266,579.54	2,316,378.87	299.49	63,500.29
560	266,523.35	2,316,401.71	291.96	63,560.94
561	266,481.89	2,316,418.29	301.73	63,605.60
562	266,430.04	2,316,464.43	312.68	63,675.01
563	266,325.22	2,316,564.59	316.93	63,819.98
564	266,242.13	2,316,664.19	315.67	63,949.69
565	266,096.62	2,316,791.47	311.38	64,143.01
566	266,006.10	2,316,871.78	304.33	64,264.03
567	265,968.42	2,316,891.05	294.66	64,306.35
568	265,868.83	2,316,931.77	298.12	64,413.94
569	265,834.55	2,316,954.89	314.03	64,455.29
570	265,777.25	2,317,033.92	340.76	64,552.90
571	265,776.13	2,317,059.35	343.65	64,578.35

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
572	265,753.97	2,317,097.47	322.75	64,622.45
573	265,713.38	2,317,139.03	306.65	64,680.54
574	265,616.85	2,317,189.55	296.54	64,789.49
575	265,547.98	2,317,222.35	297.31	64,865.77
576	265,431.14	2,317,287.50	296.19	64,999.55
577	265,349.01	2,317,322.76	292.94	65,088.93
578	265,259.55	2,317,360.07	304.45	65,185.86
579	265,193.23	2,317,429.41	315.34	65,281.81
580	265,135.43	2,317,486.01	317.32	65,362.71
581	265,098.08	2,317,530.91	326.72	65,421.11
582	265,051.50	2,317,623.07	335.70	65,524.37
583	265,006.49	2,317,735.63	333.06	65,645.59
584	264,976.88	2,317,782.86	323.23	65,701.34
585	264,811.16	2,317,970.50	319.48	65,951.69
586	264,778.67	2,318,009.80	331.93	66,002.68
587	264,774.32	2,318,024.44	15.04	66,017.95
588	264,801.19	2,318,049.82	46.71	66,054.91
589	264,883.02	2,318,126.69	46.61	66,167.19
590	264,907.86	2,318,150.33	46.49	66,201.47
591	265,003.64	2,318,241.02	16.79	66,333.39
592	264,998.17	2,318,264.78	329.51	66,357.76
593	264,909.23	2,318,344.89	310.45	66,477.46
594	264,556.42	2,318,629.53	309.62	66,930.77
595	264,095.29	2,319,021.33	309.89	67,535.88
596	263,921.89	2,319,163.88	316.25	67,760.35
597	263,782.35	2,319,349.54	324.22	67,992.61
598	263,429.33	2,319,860.70	328.46	68,613.82
599	263,360.50	2,319,987.66	343.31	68,758.24
600	263,355.21	2,320,049.20	351.21	68,820.00
601	263,339.96	2,320,117.10	350.02	68,889.60
602	263,334.88	2,320,156.68	19.95	68,929.50
603	263,360.71	2,320,180.59	50.55	68,964.69
604	263,392.43	2,320,203.72	43.61	69,003.95
605	263,416.06	2,320,239.67	26.02	69,046.97
606	263,429.53	2,320,279.42	24.09	69,088.95
607	263,442.69	2,320,302.70	22.13	69,115.68
608	263,445.38	2,320,312.92	4.44	69,126.25
609	263,441.44	2,320,351.07	4.53	69,164.60
610	263,448.24	2,320,376.52	20.42	69,190.95
611	263,465.84	2,320,412.78	18.51	69,231.26
612	263,470.78	2,320,437.94	0.44	69,256.90
613	263,462.66	2,320,482.91	343.49	69,302.59
614	263,446.03	2,320,522.53	345.67	69,345.56
615	263,442.39	2,320,557.73	354.94	69,380.95
616	263,440.22	2,320,587.17	9.56	69,410.47
617	263,456.25	2,320,624.35	4.65	69,450.96
618	263,449.26	2,320,652.37	344.66	69,479.84
619	263,442.20	2,320,675.95	342.56	69,504.45
620	263,434.98	2,320,697.87	344.64	69,527.53
621	263,431.50	2,320,713.60	326.66	69,543.64
622	263,380.58	2,320,750.33	323.23	69,606.43
623	263,366.34	2,320,790.86	342.36	69,649.38

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
624	263,357.16	2,320,823.05	338.10	69,682.85
625	263,346.64	2,320,842.94	322.55	69,705.35
626	263,327.63	2,320,860.66	317.38	69,731.34
627	263,306.81	2,320,887.10	336.53	69,764.99
628	263,304.23	2,320,903.94	2.29	69,782.03
629	263,326.30	2,320,997.29	12.10	69,877.96
630	263,337.69	2,321,056.45	17.68	69,938.21
631	263,356.43	2,321,097.65	32.32	69,983.46
632	263,378.07	2,321,123.29	46.89	70,017.02
633	263,410.29	2,321,147.03	49.84	70,057.04
634	263,435.87	2,321,171.67	32.34	70,092.56
635	263,443.50	2,321,194.33	35.12	70,116.47
636	263,458.63	2,321,206.32	58.64	70,135.77
637	263,469.77	2,321,211.35	54.00	70,147.99
638	263,483.94	2,321,226.91	41.47	70,169.04
639	263,510.67	2,321,258.11	30.08	70,210.12
640	263,533.88	2,321,323.36	22.36	70,279.37
641	263,552.60	2,321,363.23	32.28	70,323.43
642	263,571.71	2,321,386.49	31.63	70,353.52
643	263,585.53	2,321,417.73	22.33	70,387.69
644	263,599.03	2,321,453.31	30.20	70,425.74
645	263,627.62	2,321,487.84	40.49	70,470.57
646	263,652.94	2,321,516.59	45.52	70,508.88
647	263,671.21	2,321,532.11	61.70	70,532.86
648	263,690.25	2,321,537.67	80.57	70,552.69
649	263,711.39	2,321,538.63	79.36	70,573.85
650	263,733.85	2,321,546.22	62.90	70,597.56
651	263,759.61	2,321,564.60	38.10	70,629.20
652	263,772.53	2,321,597.07	1.97	70,664.15
653	263,760.51	2,321,634.56	9.95	70,703.52
654	263,778.00	2,321,657.20	37.35	70,732.12
655	263,793.97	2,321,678.36	47.79	70,758.64
656	263,815.55	2,321,691.56	58.16	70,783.95
657	263,845.62	2,321,710.52	57.53	70,819.49
658	263,872.74	2,321,727.94	60.27	70,851.72
659	263,887.19	2,321,735.23	41.80	70,867.91
660	263,892.01	2,321,748.21	5.27	70,881.75
661	263,886.88	2,321,777.79	338.12	70,911.78
662	263,872.87	2,321,798.62	326.16	70,936.88
663	263,863.87	2,321,812.09	337.17	70,953.07
664	263,860.27	2,321,829.18	339.77	70,970.54
665	263,853.95	2,321,840.78	339.44	70,983.76
666	263,851.47	2,321,851.94	22.78	70,995.18
667	263,856.82	2,321,855.27	81.09	71,001.49
668	263,863.86	2,321,853.51	131.76	71,008.74
669	263,866.80	2,321,845.64	141.10	71,017.14
670	263,872.15	2,321,842.21	106.80	71,023.50
671	263,879.61	2,321,842.09	77.03	71,030.96
672	263,890.92	2,321,847.81	49.98	71,043.63
673	263,950.53	2,321,927.54	36.55	71,143.18
674	264,059.83	2,322,076.26	39.22	71,327.74
675	264,070.84	2,322,088.43	54.76	71,344.16

12 SMA-Gto ruta puntos X Y

Vértice	X	Y	Angulo	Distancia Acumulada (m)
676	264,114.96	2,322,106.80	52.41	71,391.95
677	264,147.01	2,322,148.69	42.71	71,444.69
678	264,178.85	2,322,177.37	57.58	71,487.55
679	264,215.20	2,322,192.67	65.63	71,526.99
680	264,238.20	2,322,203.85	72.39	71,552.56
681	264,252.84	2,322,206.25	76.16	71,567.40
682	264,264.32	2,322,210.05	67.70	71,579.48
683	264,278.12	2,322,216.86	56.13	71,594.88
684	264,333.36	2,322,265.73	42.24	71,668.63
685	264,368.21	2,322,313.74	34.86	71,727.96
686	264,374.48	2,322,323.11	43.55	71,739.23
687	264,398.98	2,322,341.34	44.17	71,769.77
688	264,421.10	2,322,372.95	35.75	71,808.35
689	264,503.36	2,322,484.09	33.97	71,946.62
690	264,540.89	2,322,545.48	19.02	72,018.57
691	264,542.45	2,322,558.92	16.82	72,032.11
692	264,551.11	2,322,575.91	31.56	72,051.17
693	264,564.89	2,322,594.80	41.55	72,074.56
694	264,586.32	2,322,614.78	47.05	72,103.86
695	264,597.55	2,322,625.22	47.09	72,119.19