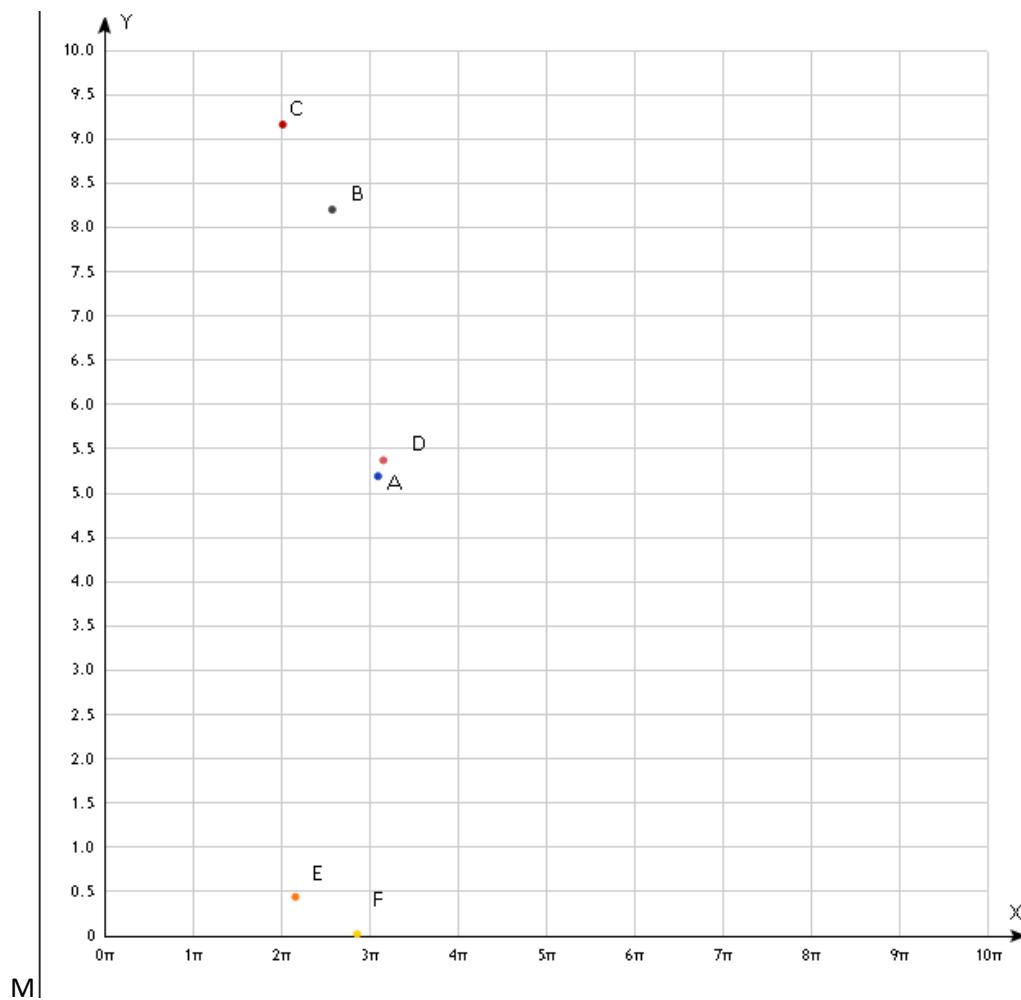


TASK_1

Cities map:



M

Matrix Distance between cities:

	A	B	C	D	E	F
A	0	3,81	4,18	3,33	4,13	2,37
B	3,81	0	0,37	3,17	7,71	3,06
C	4,18	0,37	0	3,38	9,07	3,37
D	3,33	3,17	3,38	0	7,3	4,5
E	4,13	7,71	9,07	7,3	0	5,06
F	2,37	3,06	3,37	4,5	5,06	0

All Distances:

ABCDEFA:22,3088087699306	ACBDEFA:22,4789766462423
ABCDFEA:21,3549336092937	ACBDFEA:21,5251014856054
ABCEDFA:26,5246964500087	ACBEDFA:26,5299313829701
ABCEFDA:25,2510261616084	ACBEFDA:25,2562610945698
ABCFDEA:23,5820688202658	ACBFDEA:23,6403356231699
ABCFEDA:23,2622736925024	ACBFEDA:23,3205404954065
ABDCEFA:25,8907790282609	ACDBEFA:25,8960139612223
ABDCFEA:22,948151398518	ACDBFEA:23,0064182014221
ABDECFA:28,1179142392329	ACDEBFA:28,0112480987867
ABDEFCA:26,9169557533703	ACDEFBA:26,8050546799627
ABDFCEA:27,1640390785961	ACDFBEA:27,0573729381499
ABDFECA:28,9057082224763	ACDFEBA:28,740775279126
ABECDFEA:29,9417337649887	ACEBDFA:30,1119016413004
ABECFDEA:30,8951986875604	ACEBFDA:30,9534654904645
ABEDCFA:27,9529812958826	ACEDBFA:28,176181042137
ABEDFCA:30,9679104900981	ACEDFBA:31,0209423600408
ABEFCDFA:26,6793110074823	ACEFBDA:26,9025107537368
ABEFDCFA:28,740775279126	ACEFDBA:28,9057082224763
ABFCDEA:25,0633855360825	ACFBDEA:25,2335534123942
ABFCEDA:28,9594780883971	ACFBEDA:28,9647130213585
ABFDCEA:27,0521380051885	ACFDDEA:27,1692740115575
ABFDECA:31,0209423600408	ACFDEBA:30,9679104900981
ABFECDFA:26,732342877425	ACFEBDA:26,8494788837941
ABFEDCA:26,8050546799627	ACFEDBA:26,9169557533703
ACBDEFA:22,4789766462423	ADBCEFA:22,4062648437046
ACBDFEA:21,5251014856054	ADBCEFA:19,4636372139618
ACBEDFA:26,5299313829701	ADBECFA:28,0504373696567
ACBEFDEA:25,2562610945698	ADBEFCA:26,8494788837941
ACBFDEA:23,6403356231699	ADBFCFA:25,1608416098565
ACBFEDA:23,3205404954065	ADBFECA:26,9025107537368
ACDBEFA:25,8960139612223	ADCBEFA:22,2413319003543
ACDBFEA:23,0064182014221	ADCBFEA:19,3517361405542
ACDEBFA:28,0112480987867	ADCEBFA:27,9385362962491
ACDEFBA:26,8050546799627	ADCEFBA:26,732342877425

Minimum distance:

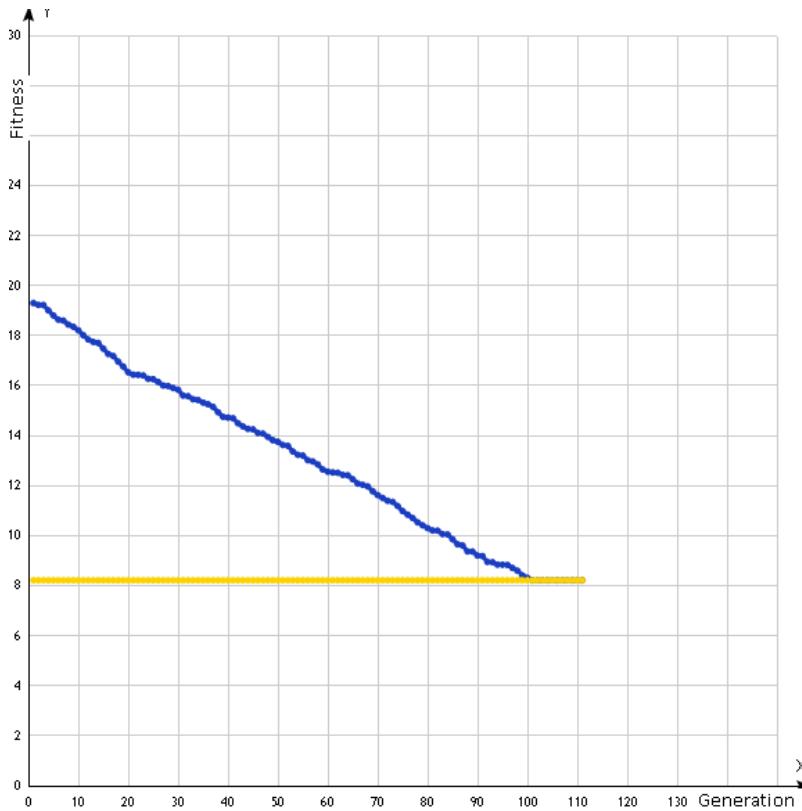
Minimum:ABFCDEA:18,1950021150232

Minimum:AEDCFBA:18,1950021150232

Для продолжения нажмите любую клавишу . . .

TASK_2

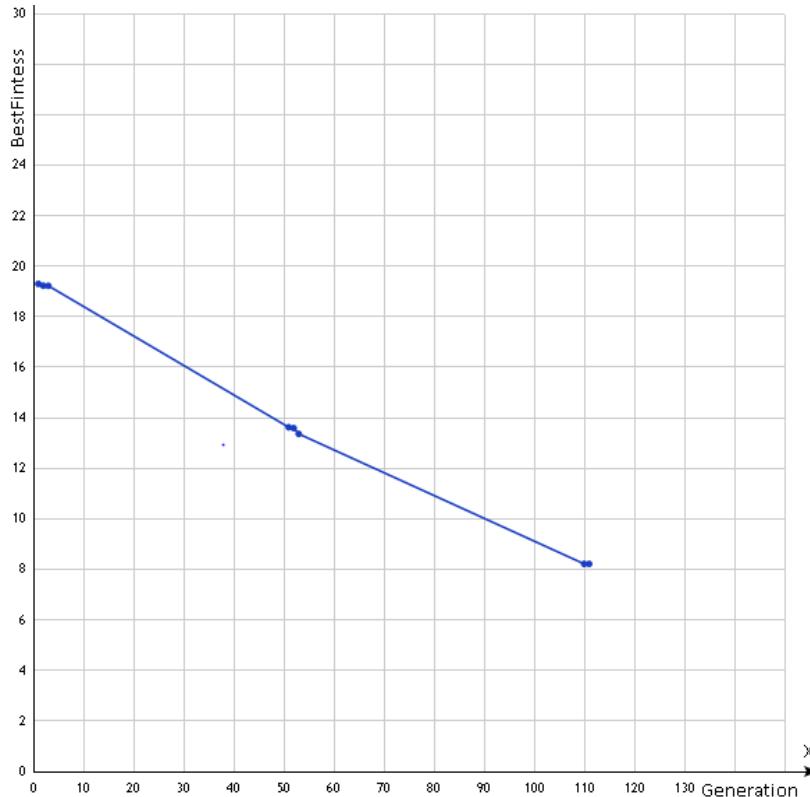
Graphic of evolution



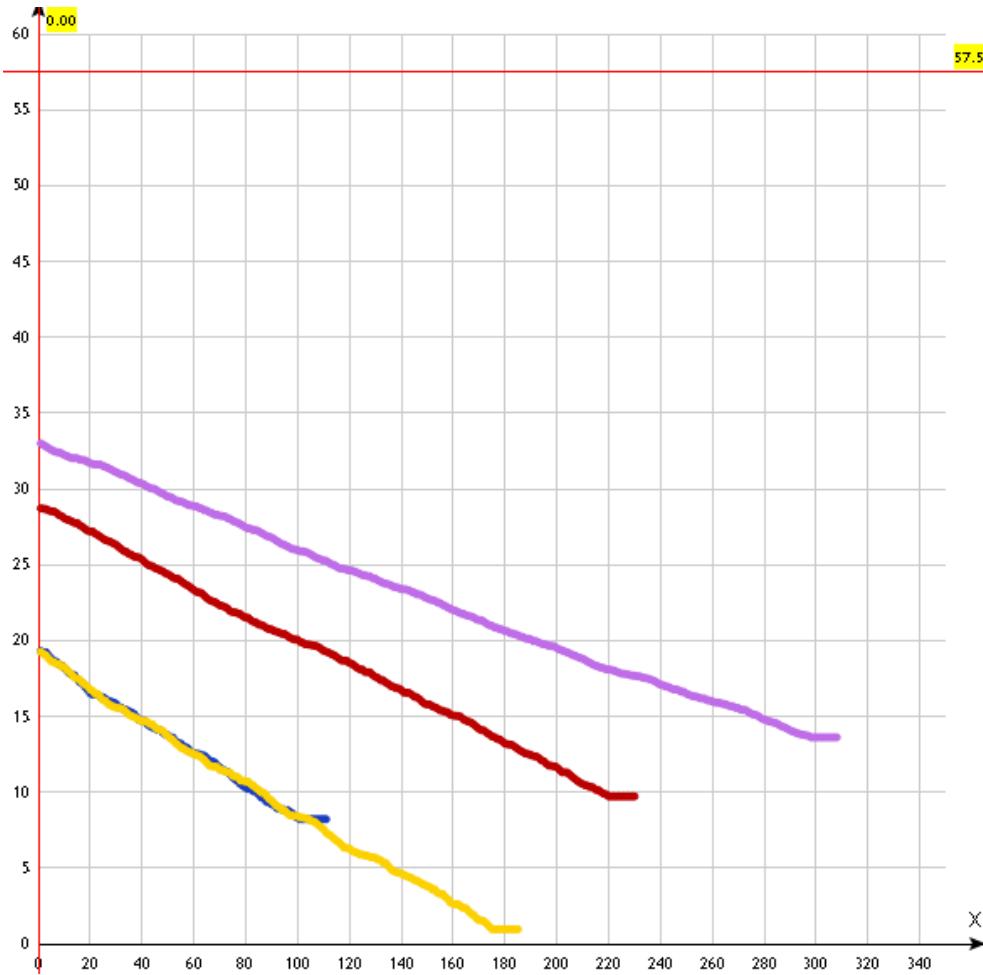
Yellow – minimum of function.

Blue – minimum of evolution algorithm.

Best fitness on 1st, 2nd, 3rd, 51st, 52nd, 53rd, penultimate and last generations:



Graphic for 6,7,8 and 9 cities:



Blue – 6 cities.

Yellow – 7 cities.

Red – 8 cities.

Pink – 9 cities.

From this graphic it is clear that, the more cities in our path, the more calculations and more steps of evolution for the convergence of the algorithm to the correct answer.