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Chromosome size –1000;

Population size – 20;

Epoch – 50;

With mutation;

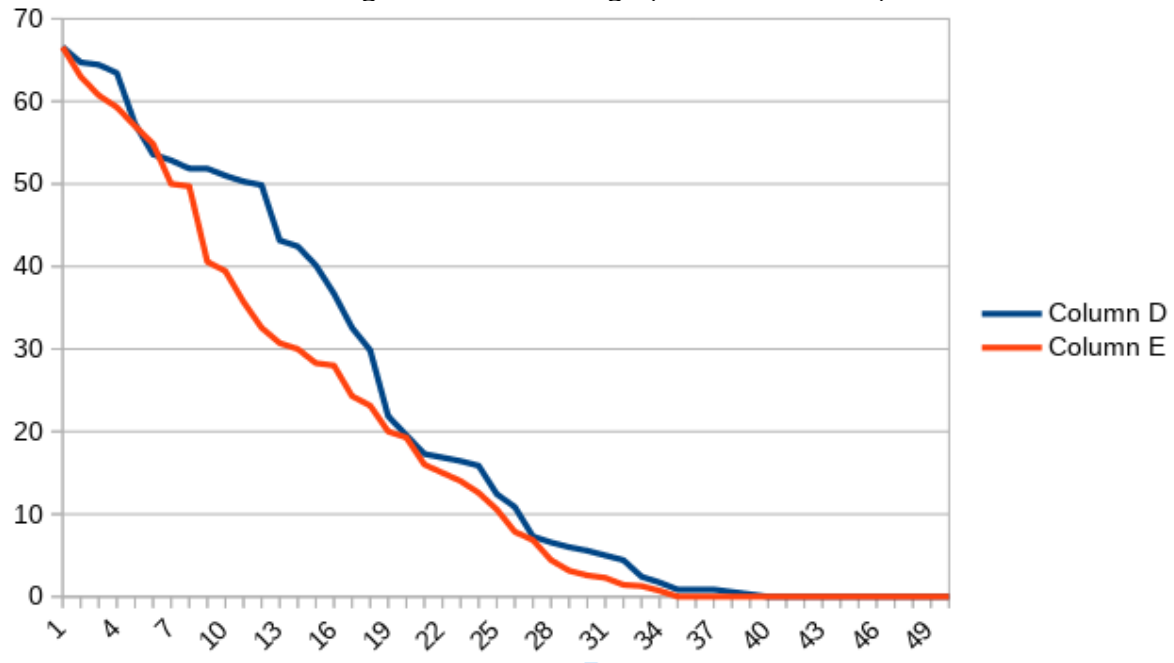
Onepoint crossover;

Truncle selection;

X – generation

Y – Fittest

Fitness is a distance between dog and nearest sausage (the less the better)



Column D – Original fitness

Column E - Shared fitness

Initial population (8 best)

population	location	Original fitness	Shared fitness
1	972, 733	239	239
2	340, 395	335	335
3	816, 890	106	479
4	922, 751	171	239
5	305, 154	151	151
6	692, 856	164	164
7	807, 974	181	181
8	200, 267	67	67

No one from 20 have neighbor in radius 10.

Middle (8 best)

population	location	Original fitness	Shared fitness
1	827, 891	118	120.76
2	875, 705	170	80.51
3	798, 825	27	27
4	40, 18	342	342
5	383, 200	183	95.30
6	190, 190	20	20
7	230, 188	42	42
8	523, 593	484	484

Last population (8 best)

population	location	Original fitness	Shared fitness
1	205, 200	5	3.2
2	203, 201	4	2.4
3	230, 188	479	479
4	200, 200	0	0
5	805, 799	6	2.3
6	796, 802	6	2.3
7	800, 800	0	0
8	200, 267	67	67

Best route:

1133133124424131411244112223233122224432314132213134224223344423411421113334241321
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Conclusions: We used shared fitness and it helped us to achieve two possible solution: sausage in (200,200) and sausage in (800, 800).