Boika Dzmitry

Exercise 3 **1. Simulate 100 dogs in the gridworld (0,0)-(1000,1000) with sausage**

at (800,800) where all dogs start from (500,500) looking for the sausage by:

(1) assuming all dog has a chromosome whose each of 1000 genes are 1, 2, 3 or 4,

(2) moving step by step according to his/her chromosome,

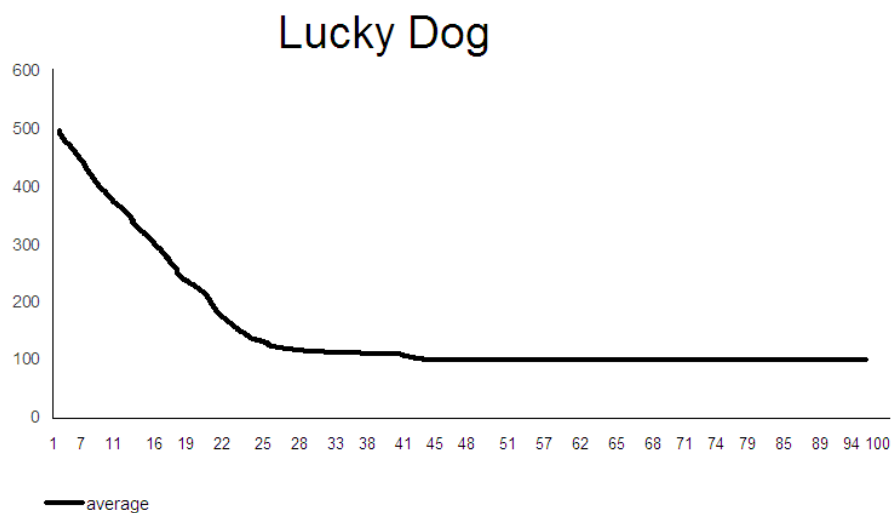**(3) with 1, 2, 3, 4 meaning a movement toward up, down, right, left, respec-**

tively.

2. Show the result with:

(1) the best and average _tness vs. generation of the 5 best dogs in the 1st, an
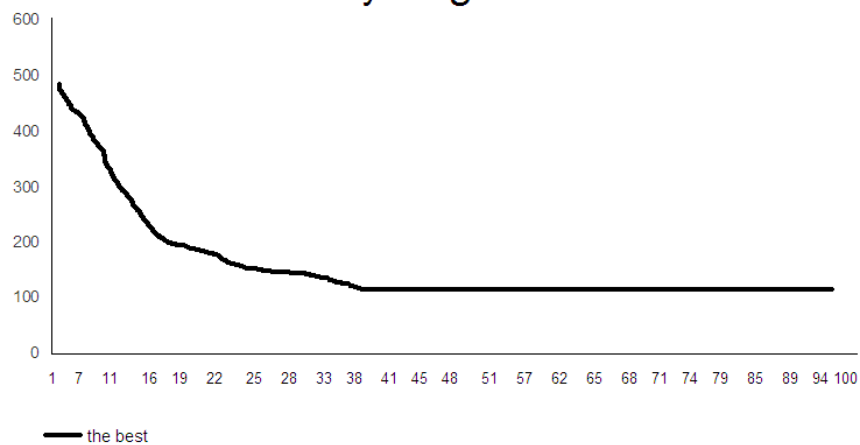
intermediate, and _nal generation.

(2) the route of the 5 best dogs in the 1st, an intermediate, and _nal generation.

Uniform – Crossover

Lucky Dog

One-point Crossover

Lucky Dog