

CSE/ECE848: Home Assignment 4: Additional Information

SubProblem 1

String	Fitness
000	0.000
001	0.333
010	0.333
011	0.667
100	0.333
101	0.667
110	0.667
111	1.000

SubProblem 2

String	Fitness
000	0.900
001	0.567
010	0.567
011	0.233
100	0.567
101	0.233
110	0.233
111	1.000

Comepting Schemata for Construction 1:

$$H_1 = (111 \text{ *** ***)}$$

$$H_0 = (000 \text{ *** ***)}$$

Competing Schemata for Construction 2:

$$H_1 = (1\text{*****} \ 1\text{*****} \ 1\text{*****})$$

$$H_0 = (0\text{*****} \ 0\text{*****} \ 0\text{*****})$$

Consider all 10 schema partitions and their two competitors for both constructions and problems.

Construction 1 for SubProblem 1:

$$F(010 \text{ 101 001 010 101 110 101 010 101 000}) = 10(1+2+1+1+2+2+2+1+2+0)/3 = 46.667$$

Construction 2 for SubProblem 1:

$$F(0101010010 \ 1010111010 \ 1010101000) = 10(2+1+2+1+2+2+2+0+2+0)/3 = 46.667$$

Calculate F() for SubProblem 2 the same way. Each color contains the three bits needed to compute subproblem.