

4) A: A 1 8 15 13 12 11 8 5
 C 15 14 10 9 8 5 8
 C 12 11 7 7 5 7 10
 G 9 8 7 4 7 8 11
 T 6 6 4 6 6 9 12
 C 3 3 3 6 9 12 15
 0 3 6 9 12 15 18
 A C G T C A

Cost: 5

c) X A C G T C A
 Y C T G C C A
 3 1 0 1 0 0 = 5

(3,3), (5,5), (6,6)