

1.) A)

j	0   1   2   3   4   5   6
P[j]	a   a   b   a   a   b   b
f[j]	0   1   0   1   2   3   0

j=1    P[0...1] = aa  
          P[1...1] = a                      -> f(1) = 1

j=2    P[0...2] = aab  
          P[1...2] = ab                      -> f(2) = 0

j=3    P[0...3] = aaba  
          P[1...3] = aba                      -> f(3) = 1

j=4    P[0...4] = aabaa  
          P[1...4] = abaa                      -> f(4) = 2

j=5    P[0...5] = aabaab  
          P[1...5] = abaab                      -> f(5) = 3

j=6    P[0...6] = aabaabb  
          P[1...6] = abaabb                      -> f(6) = 0

B) Pattern: a a b a a b b

b   a   a   a   b   b   a   a   b   a   a   b   a   a   b   b
a(1)
a   a(2)
a   a   b(2)
a   a   b   a(0)
a   a   b   a   a(0)
a   a   b   a   a   b(1)
a   a   b   a   a   b   b(3)
a   a   b   a   a   b   b(0)
a   a   b   a   a   b   b(1)
a   a   b   a   a   b   b(7)

Total number of comparisons: 17