5.1 a)

a) 3^-k

K=1 => Nbox= 2^2
K=2 => Nbox= 2^2^2
for k Nbox=2^2^k =4^k

ln(4) k =D0(- k) ln (3) => D0= ln(4)/(-ln(3))

5.1 b)

b) 4^-k
Asymetric
Lambda1 = 1/4 lambda2 = 1/2
NBox = 4 Na + 1 Nb

Seld simailarity
Nbox (eps) = Nbox (esp/lamba1) + Nbox (esp/lamba2)

Nbox = N*eps^-D0

1 = 4 (1/4)^D0 + 1 (1/2)^D0

1 = 4/2^D0^2 + 1/2^D0

c = 1/2^D0

1 = 4 c^2 + c

0 = 4 c^2 + c + 1 pq

c must be posetive
c = (sqrt (17) - 1)/8

c = 1/2^D0
ln c /ln (1/2) = d0