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 1 #Jiaxu Zhu
 2 #CSE250A hw3.2
 3 from random import randint
 4 from math import pow
 5
 6 #from decimal to binary
 7 def decimal(B):
 8     f = 0
 9     base = 1
10     for i in range(0, len(B)):
11         f += base * B[i]
12         base *= 2
13     return f
14
15 randomB = lambda length: [randint(0,1) for b in range(0, length)]
16 n = 10
17 alpha = 0.35
18 numerator = 0
19 denominator = 0
20 Z = 64
21 p = 0
22 for iter in range(0, 250000):
23     B = randomB(n)
24     f = decimal(B)
25     pEx = (1-alpha)/(1+alpha) * pow(alpha, abs(Z - f))
26     print pEx
27     denominator += pEx
28     if B[6] == 1:
29         numerator += pEx
30     if denominator > 0:
31         p = numerator / denominator
32     if (iter+1) % 10000 == 0:
33         print p
34
35
```