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# chaine_Markov_2.py
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01| import numpy as np
02| import numpy.linalg as alg
03| from math import comb
04|
05| def mat_tr(n):
06|     M = np.zeros((n, n))
07|     for i in range(n):
08|         M[i,i] = (i+1)*(n-i) / comb(n+1, 2)
09|     for i in range(1, n):
10|         M[i, i-1] = comb(n+1-i, 2) / comb(n+1, 2)
11|     for i in range(n-1):
12|         M[i, i+1] = comb(i+2, 2) / comb(n+1, 2)
13|     return M
14|
15|
16| n = 3
17| M = mat_tr(n)
18| for k in range(4):
19|     print(alg.matrix_power(M, 1 + 5*k))
20|     print('\n')
21|
```