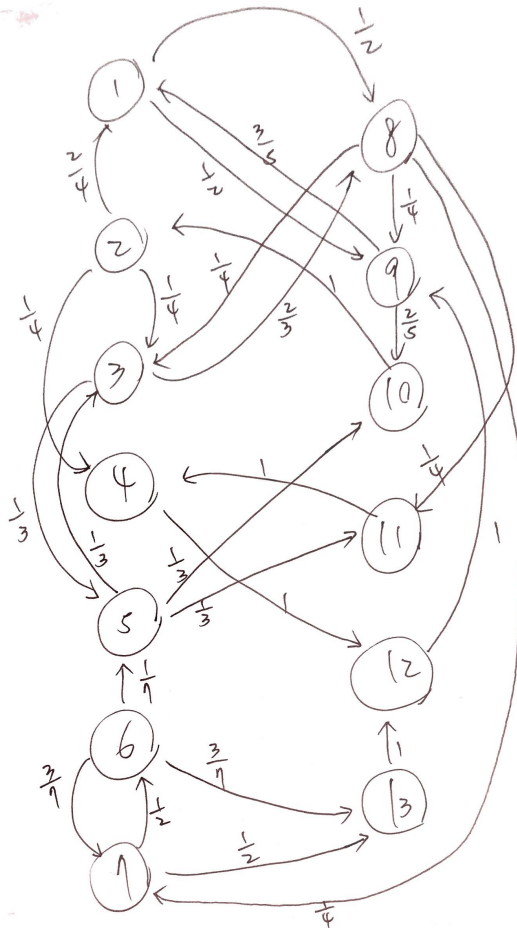


(a) Graph



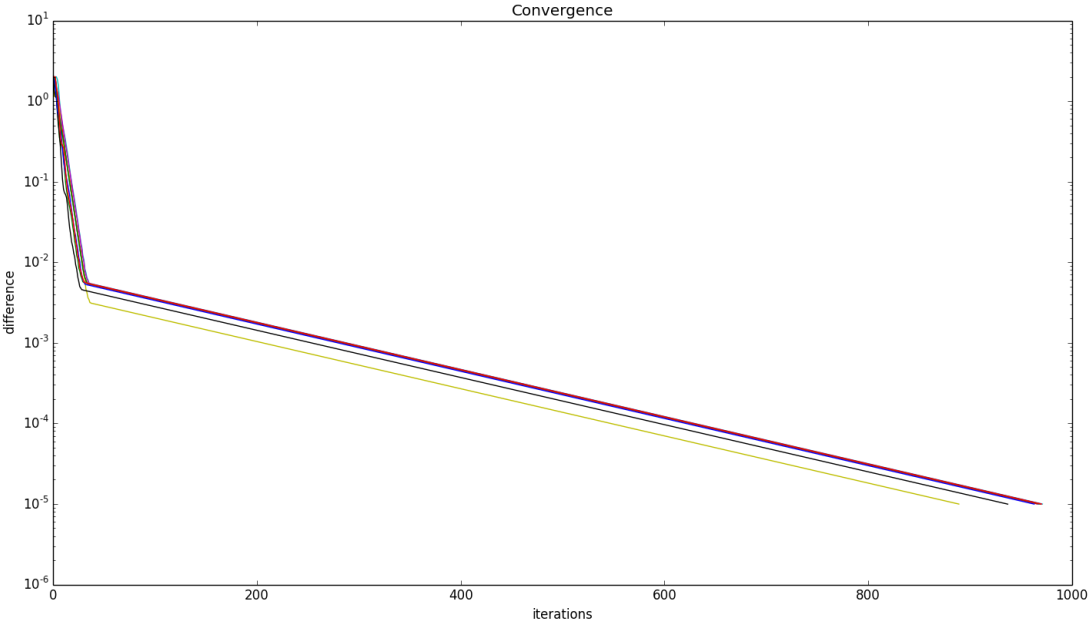
(b) Matrix A

0	1/2	0	0	0	0	0	0	3/5	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0
0	1/4	0	0	1/3	0	0	1/4	0	0	0	0	0
0	1/4	0	0	0	0	0	0	0	0	1	0	0
0	0	1/3	0	0	1/7	0	0	0	0	0	0	0
0	0	0	0	0	0	1/2	0	0	0	0	0	0
0	0	0	0	0	3/7	0	1/4	0	0	0	0	0
1/2	0	2/3	0	0	0	0	0	0	0	0	0	0
1/2	0	0	0	0	0	0	1/4	0	0	0	1	0
0	0	0	0	1/3	0	0	0	2/5	0	0	0	0
0	0	0	0	1/3	0	0	1/4	0	0	0	0	0
0	0	0	1	0	0	0	0	0	0	0	0	1
0	0	0	0	0	3/7	1/2	0	0	0	0	0	0

(c)

umbers	1	2	3	4	5	6	7	8	9	10
ector	$\begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 1 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \\ 0 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 1 \\ 0 \\ 0 \end{bmatrix}$
onvergence	[[2.4 224784 3e-04]	[[2.4 208703 0e-04]	[[2.4 288407 2e-04]	[[2.4 252134 3e-04]	[[2.4 307385 9e-04]	[[2.4 220807 5e-04]	[[2.4 174525 5e-04]	[[2.4 186198 0e-04]	[[2.4 252134 3e-04]	[[2.4 208703 0e-04]
	[1.29 980087 e-04]	[1.29 893802 e-04]	[1.30 321461 e-04]	[1.30 126836 e-04]	[1.30 423293 e-04]	[1.29 958750 e-04]	[1.29 710420 e-04]	[1.29 773049 e-04]	[1.30 126836 e-04]	[1.29 893802 e-04]
	[8.98 055475 e-05]	[8.97 459313 e-05]	[9.00 414089 e-05]	[8.99 069389 e-05]	[9.01 117663 e-05]	[8.97 908050 e-05]	[8.96 192295 e-05]	[8.96 625012 e-05]	[8.99 069389 e-05]	[8.97 459313 e-05]
	[9.01 916510 e-05]	[9.01 317786 e-05]	[9.04 285265 e-05]	[9.02 934784 e-05]	[9.04 991864 e-05]	[9.01 768451 e-05]	[9.00 045320 e-05]	[9.00 479897 e-05]	[9.02 934784 e-05]	[9.01 317786 e-05]
	[3.34 579981 e-05]	[3.34 357875 e-05]	[3.35 458708 e-05]	[3.34 957726 e-05]	[3.35 720832 e-05]	[3.34 525057 e-05]	[3.33 885834 e-05]	[3.34 047047 e-05]	[3.34 957726 e-05]	[3.34 357875 e-05]
	[2.30 864198 e-05]	[2.30 710942 e-05]	[2.31 470529 e-05]	[2.31 124846 e-05]	[2.31 651398 e-05]	[2.30 826299 e-05]	[2.30 385228 e-05]	[2.30 496467 e-05]	[2.31 124846 e-05]	[2.30 710942 e-05]

	[4.58 626713 e-05]	[4.58 322260 e-05]	[4.59 831230 e-05]	[4.59 144508 e-05]	[4.60 190538 e-05]	[4.58 551425 e-05]	[4.57 675208 e-05]	[4.57 896192 e-05]	[4.59 144508 e-05]	[4.58 322260 e-05]
	[1.82 218347 e-04]	[1.82 097384 e-04]	[1.82 696917 e-04]	[1.82 424073 e-04]	[1.82 839675 e-04]	[1.82 188434 e-04]	[1.81 840301 e-04]	[1.81 928101 e-04]	[1.82 424073 e-04]	[1.82 097384 e-04]
	[2.92 717480 e-04]	[2.92 523164 e-04]	[2.93 486260 e-04]	[2.93 047961 e-04]	[2.93 715588 e-04]	[2.92 669427 e-04]	[2.92 110184 e-04]	[2.92 251226 e-04]	[2.93 047961 e-04]	[2.92 523164 e-04]
	[1.29 106940 e-04]	[1.29 021234 e-04]	[1.29 446021 e-04]	[1.29 252703 e-04]	[1.29 547169 e-04]	[1.29 085746 e-04]	[1.28 839084 e-04]	[1.28 901293 e-04]	[1.29 252703 e-04]	[1.29 021234 e-04]
	[5.70 907626 e-05]	[5.70 528637 e-05]	[5.72 407033 e-05]	[5.71 552187 e-05]	[5.72 854306 e-05]	[5.70 813905 e-05]	[5.69 723174 e-05]	[5.69 998258 e-05]	[5.71 552187 e-05]	[5.70 528637 e-05]
	[1.24 072629 e-04]	[1.23 990265 e-04]	[1.24 398487 e-04]	[1.24 212708 e-04]	[1.24 495691 e-04]	[1.24 052261 e-04]	[1.23 815217 e-04]	[1.23 875000 e-04]	[1.24 212708 e-04]	[1.23 990265 e-04]
	[3.30 475138 e-05]]	[3.30 255756 e-05]]	[3.31 343083 e-05]]	[3.30 848248 e-05]]	[3.31 601991 e-05]]	[3.30 420887 e-05]]	[3.29 789507 e-05]]	[3.29 948742 e-05]]	[3.30 848248 e-05]]	[3.30 255756 e-05]]

onvergence raph	
ifference	Though the initial matrixes aren't the same, but after many times of calculation, their convergences are only with very tiny differences, almost the same.

(d) Method to fix the last problem

After the calculation, the convergence doesn't satisfy the probability condition. I suppose it is because that the computer can't store as many floating point as the calculation is required, thus cause the errors. There's no way to fix this problem currently, it may require a more advanced technology or a counting maching.