

LDPC2

Enter the received codeword[-0.4 -0.2 -1.1 0.6 -0.5 0.5 -0.4 -1.2 0.5 -0.2 -1 0.5]

Enter the H matrix[1 1 1 0 0 0 0 0 0 0 0 0; 0 0 0 1 1 1 0 0 0 0 0 0; 1 0 0 1 0 0 1 0 0 0 0 0; 0 1 0 0 1 0 0 1 0 0 0 0]

Enter the variance of the channel[0.10 0.15 0.20 0.25]

p =

0.9997	0.9820	1.0000	0.0000	1.0000	0.0000	0.9997
1.0000	0.0000	0.9820	1.0000	0.0000		

Iteration number 1

Variance 1.000000e-01

q0 =

0.9997	0	0.9997	0
0.9820	0	0	0.9820
1.0000	0	0	0
0	0.0000	0.0000	0
0	1.0000	0	1.0000
0	0.0000	0	0
0	0	0.9997	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0003	0	0.0003	0
0.0180	0	0	0.0180
0.0000	0	0	0
0	1.0000	1.0000	0
0	0.0000	0	0.0000
0	1.0000	0	0
0	0	0.0003	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9820	0.9997	0.9817	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.0001	0.9999	0.0001	0
0.0003	0	0	0.9993	0	0	0.0003
0	0	0	0	0	0	0
0	1.0000	0	0	0.9820	0	0
0.9820	0	0	0	0	0	0

r0 =

	0.0180	0.0003	0.0183	0	0	0	0
0	0	0	0	0			
	0	0	0	0.9999	0.0001	0.9999	0
0	0	0	0	0			
	0.9997	0	0	0.0007	0	0	0.9997
0	0	0	0	0			
	0	0.0000	0	0	0.0180	0	0
0.0180	0	0	0	0	0		

Q0 =

	0.0000	1.0000	0.0000	1.0000	0.9796	0.5317	0.0000
0.0000	1.0000	0.0180	0.0000	1.0000			

Q1 =

	1.0000	0.0000	1.0000	0.0000	0.0204	0.4683	1.0000
1.0000	0.0000	0.9820	1.0000	0.0000			

output =

1	0	1	0	0	0	1	1	0	1	1	0
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Iteration number 2

Variance 1.000000e-01

q0 =

1.0000	0	0.9820	0
0.0025	0	0	0.0180
1.0000	0	0	0
0	0.0000	0.0634	0
0	0.9975	0	0.5317
0	0.0000	0	0
0	0	0.9997	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0000	0	0.0180	0
0.9975	0	0	0.9820
0.0000	0	0	0
0	1.0000	0.9366	0
0	0.0025	0	0.4683
0	1.0000	0	0
0	0	0.0003	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

	0.0025	1.0000	0.0025	0	0	0	0
0	0	0	0	0			
	0	0	0	0.0025	1.0000	0.0025	0
0	0	0	0	0			
	0.0637	0	0	0.9817	0	0	0.0791
0	0	0	0	0			
	0	0.5317	0	0	0.0180	0	0
0.4695	0	0	0	0	0		

r0 =

	0.9975	0.0000	0.9975	0	0	0	0
0	0	0	0	0			
	0	0	0	0.9975	0.0000	0.9975	0
0	0	0	0	0			
	0.9363	0	0	0.0183	0	0	0.9209
0	0	0	0	0			
	0	0.4683	0	0	0.9820	0	0
0.5305	0	0	0	0	0		

Q0 =

	0.0000	1.0000	0.0000	1.0000	0.0180	0.9820	0.0000
0.0000	1.0000	0.0180	0.0000	1.0000			

Q1 =

	1.0000	0.0000	1.0000	0.0000	0.9820	0.0180	1.0000
1.0000	0.0000	0.9820	1.0000	0.0000			

output =

1	0	1	0	1	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 3

Variance 1.000000e-01

q0 =

1.0000	0	1.0000	0
0.9796	0	0	0.0000
1.0000	0	0	0
0	0.0000	0.0024	0
0	1.0000	0	0.5000
0	0.0000	0	0
0	0	0.9997	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0000	0	0.0000	0
0.0204	0	0	1.0000
0.0000	0	0	0
0	1.0000	0.9976	0
0	0.0000	0	0.5000
0	1.0000	0	0
0	0	0.0003	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9796	1.0000	0.9796	0	0	0	0
0	0	0	0	0		
	0	0	0	0.0000	1.0000	0.0000
0	0	0	0	0		
0.0028	0	0	0.9997	0	0	0.0024
0	0	0	0	0		
0	0.5000	0	0	0	0.0000	0
0.5000	0	0	0	0	0	

r0 =

0.0204	0.0000	0.0204	0	0	0	0
0	0	0	0	0		
	0	0	0	1.0000	0.0000	1.0000
0	0	0	0	0		
0.9972	0	0	0.0003	0	0	0.9976
0	0	0	0	0		
0	0.5000	0	0	0	1.0000	0
0.5000	0	0	0	0	0	

Q0 =

0.0000	0.9988	0.0000	1.0000	0.0000	0.0204	0.0000
0.0000	1.0000	0.0180	0.0000	1.0000		

Q1 =

1.0000	0.0012	1.0000	0.0000	1.0000	0.9796	1.0000
1.0000	0.0000	0.9820	1.0000	0.0000		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 4
Variance 1.000000e-01

q0 =

1.0000	0	0.9841	0
0.9820	0	0	0.0012

1.0000	0	0	0
0	0.0000	0.1173	0
0	1.0000	0	0.5006
0	0.0000	0	0
0	0	0.9997	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0000	0	0.0159	0
0.0180	0	0	0.9988
0.0000	0	0	0
0	1.0000	0.8827	0
0	0.0000	0	0.4994
0	1.0000	0	0
0	0	0.0003	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9820	1.0000	0.9820	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0000	1.0000	0.0000
0	0	0	0	0	0	0
0.1176	0	0	0	0.9838	0	0.1295
0	0	0	0	0	0	0
0.4994	0.5006	0	0	0	0.0012	0
	0	0	0	0	0	0

r0 =

0.0180	0.0000	0.0180	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	1.0000	0.0000	1.0000
0	0	0	0	0	0	0
0.8824	0	0	0	0.0162	0	0.8705
0	0	0	0	0	0	0
0.5006	0.4994	0	0	0	0.9988	0
	0	0	0	0	0	0

Q0 =

0.0024	0.9999	0.0000	0.9978	0.0012	0.0001	0.0000
0.0000	1.0000	0.0180	0.0000	1.0000		

Q1 =

0.9976	0.0001	1.0000	0.0022	0.9988	0.9999	1.0000
1.0000	0.0000	0.9820	1.0000	0.0000		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

It took 4 number of iterations

p =

0.9952	0.9350	1.0000	0.0003	0.9987	0.0013	0.9952
1.0000	0.0013	0.9350	1.0000	0.0013		

Iteration number 1

Variance 1.500000e-01

q0 =

0.9952	0	0.9952	0
0.9350	0	0	0.9350
1.0000	0	0	0
0	0.0003	0.0003	0
0	0.9987	0	0.9987
0	0.0013	0	0
0	0	0.9952	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0048	0	0.0048	0
0.0650	0	0	0.0650
0.0000	0	0	0
0	0.9997	0.9997	0
0	0.0013	0	0.0013
0	0.9987	0	0
0	0	0.0048	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9350	0.9952	0.9309	0	0	0	0
0	0	0	0	0		
	0	0	0.0025	0.9984	0.0016	0
0	0	0	0	0		
0.0051	0	0	0.9904	0	0	0.0051
0	0	0	0	0		
	0.9987	0	0	0.9350	0	0
0.9339	0	0	0	0		

r0 =

	0.0650	0.0048	0.0691	0	0	0	0
0	0	0	0	0			
	0	0	0	0.9975	0.0016	0.9984	0
0	0	0	0	0			
	0.9949	0	0	0.0096	0	0	0.9949
0	0	0	0	0			
	0	0.0013	0	0	0.0650	0	0
0.0661	0	0	0	0	0		

Q0 =

	0.0004	0.9999	0.0000	0.9987	0.9193	0.5582	0.0000
0.0000	0.9987	0.0650	0.0000	0.9987			

Q1 =

	0.9996	0.0001	1.0000	0.0013	0.0807	0.4418	1.0000
1.0000	0.0013	0.9350	1.0000	0.0013			

output =

1	0	1	0	0	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 2

Variance 1.500000e-01

q0 =

1.0000	0	0.9350	0
0.0180	0	0	0.0650
1.0000	0	0	0
0	0.0000	0.1165	0
0	0.9820	0	0.5582
0	0.0013	0	0
0	0	0.9952	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0000	0	0.0650	0
0.9820	0	0	0.9350
0.0000	0	0	0
0	1.0000	0.8835	0
0	0.0180	0	0.4418
0	0.9987	0	0
0	0	0.0048	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0

```

0      0      0      0

r1 =
0.0180  1.0000  0.0180  0      0      0      0
0      0      0      0      0      0      0
0      0      0      0      0.0192  0.9987  0.0180  0
0      0      0      0      0.9309  0      0      0.1663
0      0      0      0      0      0      0      0
0.4493  0.5582  0      0      0      0.0650  0      0
0.4493  0      0      0      0      0      0      0

r0 =
0.9820  0.0000  0.9820  0      0      0      0
0      0      0      0      0      0      0
0      0      0      0      0.9808  0.0013  0.9820  0
0      0      0      0      0.0691  0      0      0.8337
0      0      0      0      0      0      0      0
0.5507  0.4418  0      0      0      0.9350  0      0
0.5507  0      0      0      0      0      0      0

Q0 =
0.0000  0.9997  0.0000  0.9987  0.0648  0.9350  0.0010
0.0000  0.9987  0.0650  0.0000  0.9987  0.9350  0.0010

Q1 =
1.0000  0.0003  1.0000  0.0013  0.9352  0.0650  0.9990
1.0000  0.0013  0.9350  1.0000  0.0013  0.9350  0.9990

output =
1      0      1      0      1      0      1      1      0      1      1      0

Iteration number 3
Variance 1.500000e-01
q0 =
0.9993  0      0.9999  0
0.9193  0      0      0.0004
1.0000  0      0      0
0      0.0000  0.0168  0
0      0.9999  0      0.5006
0      0.0013  0      0
0      0      0.9952  0
0      0      0      1.0000
0      0      0      0
0      0      0      0
0      0      0      0
0      0      0      0
0      0      0      0

```


q1 =

0.0007	0	0.0001	0
0.0807	0	0	0.9996
0.0000	0	0	0
0	1.0000	0.9832	0
0	0.0001	0	0.4994
0	0.9987	0	0
0	0	0.0048	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9193	0.9993	0.9187	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0014	0.9987	0.0001
0	0	0	0	0	0	0
0.0215	0	0	0	0.9951	0	0.0169
0	0	0	0	0	0	0
0	0.5006	0	0	0	0.0004	0
0.4994	0	0	0	0	0	0

r0 =

0.0807	0.0007	0.0813	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9986	0.0013	0.9999
0	0	0	0	0	0	0
0.9785	0	0	0	0.0049	0	0.9831
0	0	0	0	0	0	0
0	0.4994	0	0	0	0.9996	0
0.5006	0	0	0	0	0	0

Q0 =

0.0012	0.9906	0.0000	0.9988	0.0004	0.0818	0.0001
0.0000	0.9987	0.0650	0.0000	0.9987	0	0

Q1 =

0.9988	0.0094	1.0000	0.0012	0.9996	0.9182	0.9999
1.0000	0.0013	0.9350	1.0000	0.0013	0	0

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 4

Variance 1.500000e-01

q0 =

0.9999	0	0.9479	0
0.9349	0	0	0.0094
1.0000	0	0	0
0	0.0000	0.1977	0
0	1.0000	0	0.5048
0	0.0013	0	0
0	0	0.9952	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0001	0	0.0521	0
0.0651	0	0	0.9906
0.0000	0	0	0
0	1.0000	0.8023	0
0	0.0000	0	0.4952
0	0.9987	0	0
0	0	0.0048	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.9349	0.9999	0.9348	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0013	0.9987	0.0000
0	0	0	0	0	0	0
0.2006	0	0	0	0.9436	0	0.2292
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.4952	0.5048	0	0	0.0094	0	0
	0	0	0	0	0	0

r0 =

0.0651	0.0001	0.0652	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9987	0.0013	1.0000
0	0	0	0	0	0	0
0.7994	0	0	0	0.0564	0	0.7708
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.5048	0.4952	0	0	0.9906	0	0
	0	0	0	0	0	0

Q0 =

0.0171	0.9985	0.0000	0.9845	0.0094	0.0017	0.0014
0.0000	0.9987	0.0650	0.0000	0.9987		

Q1 =

0.9829	0.0015	1.0000	0.0155	0.9906	0.9983	0.9986
1.0000	0.0013	0.9350	1.0000	0.0013		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

It took 4 number of iterations

p =

0.9820	0.8808	1.0000	0.0025	0.9933	0.0067	0.9820
1.0000	0.0067	0.8808	1.0000	0.0067		

Iteration number 1
Variance 2.000000e-01
q0 =

0.9820	0	0.9820	0
0.8808	0	0	0.8808
1.0000	0	0	0
0	0.0025	0.0025	0
0	0.9933	0	0.9933
0	0.0067	0	0
0	0	0.9820	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0180	0	0.0180	0
0.1192	0	0	0.1192
0.0000	0	0	0
0	0.9975	0.9975	0
0	0.0067	0	0.0067
0	0.9933	0	0
0	0	0.0180	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.8808	0.9820	0.8671	0	0	0	0
0	0	0	0	0		
	0	0	0.0133	0.9909	0.0091	0
0	0	0	0	0		
0.0204	0	0	0.9647	0	0	0.0204
0	0	0	0	0		

	0	0.9933	0	0	0	0.8808	0	0
0.8757		0	0	0	0	0		

r0 =

	0.1192	0.0180	0.1329	0	0	0	0
0	0	0	0	0	0		
	0	0	0	0.9867	0.0091	0.9909	0
0	0	0	0	0			
	0.9796	0	0	0.0353	0	0	0.9796
0	0	0	0	0			
	0	0.0067	0	0	0.1192	0	0
0.1243		0	0	0	0		

Q0 =

	0.0028	0.9991	0.0001	0.9933	0.8438	0.5777	0.0004
0.0000	0.9933	0.1192	0.0000	0.9933			

Q1 =

	0.9972	0.0009	0.9999	0.0067	0.1562	0.4223	0.9996
1.0000	0.0067	0.8808	1.0000	0.0067			

output =

1	0	1	0	0	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 2
Variance 2.000000e-01

q0 =

0.9996	0	0.8808	0
0.0475	0	0	0.1193
1.0000	0	0	0
0	0.0001	0.1554	0
0	0.9526	0	0.5777
0	0.0067	0	0
0	0	0.9820	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0004	0	0.1192	0
0.9525	0	0	0.8807
0.0000	0	0	0
0	0.9999	0.8446	0
0	0.0474	0	0.4223
0	0.9933	0	0
0	0	0.0180	0
0	0	0	0.0000

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.0475	0.9996	0.0478	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.0535	0.9932	0.0475	0
0	0	0	0	0	0	0
0.1678	0	0	0.8671	0	0	0.2375
0	0	0	0	0	0	0
0	0.5777	0	0	0.1193	0	0
0.4409	0	0	0	0	0	0

r0 =

0.9525	0.0004	0.9522	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.9465	0.0068	0.9525	0
0	0	0	0	0	0	0
0.8322	0	0	0.1329	0	0	0.7625
0	0	0	0	0	0	0
0	0.4223	0	0	0.8807	0	0
0.5591	0	0	0	0	0	0

Q0 =

0.0002	0.9979	0.0000	0.9933	0.1179	0.8810	0.0057
0.0000	0.9933	0.1192	0.0000	0.9933		

Q1 =

0.9998	0.0021	1.0000	0.0067	0.8821	0.1190	0.9943
1.0000	0.0067	0.8808	1.0000	0.0067		

output =

1	0	1	0	1	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 3
Variance 2.000000e-01
q0 =

0.9963	0	0.9991	0
0.8438	0	0	0.0029
1.0000	0	0	0
0	0.0004	0.0420	0
0	0.9991	0	0.5033
0	0.0067	0	0
0	0	0.9820	0
0	0	0	1.0000
0	0	0	0
0	0	0	0

0	0	0	0
0	0	0	0

q1 =

0.0037	0	0.0009	0
0.1562	0	0	0.9971
0.0000	0	0	0
0	0.9996	0.9580	0
0	0.0009	0	0.4967
0	0.9933	0	0
0	0	0.0180	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.8438	0.9963	0.8413	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.0076	0.9929	0.0013	0
0.0585	0	0	0.9811	0	0	0.0429
0	0	0	0	0	0	0
0.4967	0.5033	0	0	0.0029	0	0
	0	0	0	0		

r0 =

0.1562	0.0037	0.1587	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.9924	0.0071	0.9987	0
0.9415	0	0	0.0189	0	0	0.9571
0	0	0	0	0	0	0
0.5033	0.4967	0	0	0.9971	0	0
	0	0	0	0		

Q0 =

0.0061	0.9737	0.0001	0.9938	0.0028	0.1610	0.0008
0.0000	0.9933	0.1192	0.0000	0.9933		

Q1 =

0.9939	0.0263	0.9999	0.0062	0.9972	0.8390	0.9992
1.0000	0.0067	0.8808	1.0000	0.0067		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 4
Variance 2.000000e-01
q0 =

0.9989	0	0.9100	0
0.8794	0	0	0.0267
1.0000	0	0	0
0	0.0000	0.2447	0
0	1.0000	0	0.5137
0	0.0067	0	0
0	0	0.9820	0
0	0	0	1.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0011	0	0.0900	0
0.1206	0	0	0.9733
0.0000	0	0	0
0	1.0000	0.7553	0
0	0.0000	0	0.4863
0	0.9933	0	0
0	0	0.0180	0
0	0	0	0.0000
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.8794	0.9988	0.8785	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0067	0.9933	0.0001
0.2539	0	0	0	0.8952	0	0.2907
0	0	0	0	0	0	0
0.4870	0.5137	0	0	0.0267	0	0
	0	0	0	0	0	0

r0 =

0.1206	0.0012	0.1215	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9933	0.0067	0.9999
0.7461	0	0	0	0.1048	0	0.7093
0	0	0	0	0	0	0
0.5130	0.4863	0	0	0.9733	0	0
	0	0	0	0	0	0

Q0 =

0.0435	0.9920	0.0001	0.9588	0.0265	0.0099	0.0074
0.0000	0.9933	0.1192	0.0000	0.9933		

Q1 =

0.9565	0.0080	0.9999	0.0412	0.9735	0.9901	0.9926
1.0000	0.0067	0.8808	1.0000	0.0067		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

It took 4 number of iterations

p =

0.9608	0.8320	0.9998	0.0082	0.9820	0.0180	0.9608
0.9999	0.0180	0.8320	0.9997	0.0180		

Iteration number 1
Variance 2.500000e-01
q0 =

0.9608	0	0.9608	0
0.8320	0	0	0.8320
0.9998	0	0	0
0	0.0082	0.0082	0
0	0.9820	0	0.9820
0	0.0180	0	0
0	0	0.9608	0
0	0	0	0.9999
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0392	0	0.0392	0
0.1680	0	0	0.1680
0.0002	0	0	0
0	0.9918	0.9918	0
0	0.0180	0	0.0180
0	0.9820	0	0
0	0	0.0392	0
0	0	0	0.0001
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.8319	0.9607	0.8060	0	0	0	0
0	0	0	0	0		

	0	0	0	0.0353	0.9741	0.0259	0
0	0	0	0	0			
	0.0467	0	0	0.9247	0	0	0.0467
0	0	0	0	0			
	0	0.9819	0	0	0.8320	0	0
0.8201	0	0	0	0	0		

r0 =

	0.1681	0.0393	0.1940	0	0	0	0
0	0	0	0	0			
	0	0	0	0.9647	0.0259	0.9741	0
0	0	0	0	0			
	0.9533	0	0	0.0753	0	0	0.9533
0	0	0	0	0			
	0	0.0181	0	0	0.1680	0	0
0.1799	0	0	0	0	0		

Q0 =

	0.0098	0.9963	0.0006	0.9820	0.7736	0.5917	0.0020
0.0003	0.9820	0.1680	0.0003	0.9820			

Q1 =

	0.9902	0.0037	0.9994	0.0180	0.2264	0.4083	0.9980
0.9997	0.0180	0.8320	0.9997	0.0180			

output =

1	0	1	0	0	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 2
Variance 2.500000e-01
q0 =

0.9980	0	0.8321	0
0.0835	0	0	0.1685
0.9998	0	0	0
0	0.0007	0.1835	0
0	0.9169	0	0.5917
0	0.0180	0	0
0	0	0.9608	0
0	0	0	0.9999
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0020	0	0.1679	0
0.9165	0	0	0.8315
0.0002	0	0	0
0	0.9993	0.8165	0

0	0.0831	0	0.4083
0	0.9820	0	0
0	0	0.0392	0
0	0	0	0.0001
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.0836	0.9979	0.0851	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0981	0.9814	0.0837
0	0	0	0	0	0	0
0.2083	0	0	0	0.8061	0	0.2898
0	0	0	0	0	0	0
0	0.5917	0	0	0	0.1685	0
0.4392	0	0	0	0	0	0

r0 =

0.9164	0.0021	0.9149	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9019	0.0186	0.9163
0	0	0	0	0	0	0
0.7917	0	0	0	0.1939	0	0.7102
0	0	0	0	0	0	0
0	0.4083	0	0	0	0.8315	0
0.5608	0	0	0	0	0	0

Q0 =

0.0010	0.9927	0.0000	0.9821	0.1636	0.8330	0.0164
0.0001	0.9820	0.1680	0.0003	0.9820		

Q1 =

0.9990	0.0073	1.0000	0.0179	0.8364	0.1670	0.9836
0.9999	0.0180	0.8320	0.9997	0.0180		

output =

1	0	1	0	1	0	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

Iteration number 3
Variance 2.500000e-01
q0 =

0.9894	0	0.9963	0
0.7737	0	0	0.0105
0.9998	0	0	0
0	0.0020	0.0703	0
0	0.9963	0	0.5090
0	0.0180	0	0

0	0	0.9608	0
0	0	0	0.9999
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0106	0	0.0037	0
0.2263	0	0	0.9895
0.0002	0	0	0
0	0.9980	0.9297	0
0	0.0037	0	0.4910
0	0.9820	0	0
0	0	0.0392	0
0	0	0	0.0001
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.7736	0.9892	0.7679	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0216	0.9801	0.0057
0	0	0	0	0	0	0.0735
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.4912	0	0	0	0	0	0

r0 =

0.2264	0.0108	0.2321	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9784	0.0199	0.9943
0	0	0	0	0	0	0.9265
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.5088	0	0	0	0	0	0

Q0 =

0.0159	0.9506	0.0005	0.9837	0.0096	0.2371	0.0032
0.0001	0.9820	0.1680	0.0003	0.9820		

Q1 =

0.9841	0.0494	0.9995	0.0163	0.9904	0.7629	0.9968
0.9999	0.0180	0.8320	0.9997	0.0180		

output =

1 0 1 0 1 1 1 1 0 1 1 0

Iteration number 4

Variance 2.500000e-01

q0 =

0.9953	0	0.8778	0
0.8269	0	0	0.0511
0.9998	0	0	0
0	0.0004	0.2720	0
0	0.9998	0	0.5256
0	0.0180	0	0
0	0	0.9608	0
0	0	0	0.9999
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

q1 =

0.0047	0	0.1222	0
0.1731	0	0	0.9489
0.0002	0	0	0
0	0.9996	0.7280	0
0	0.0002	0	0.4744
0	0.9820	0	0
0	0	0.0392	0
0	0	0	0.0001
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

r1 =

0.8268	0.9951	0.8239	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0182	0.9817	0.0006
0.2899	0	0	0	0.8482	0	0
0	0	0	0	0	0	0.3277
0	0	0	0	0	0	0
0.4770	0.5256	0	0	0	0.0512	0
	0	0	0	0	0	0

r0 =

0.1732	0.0049	0.1761	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.9818	0.0183	0.9994
0	0	0	0	0	0	0
0.7101	0	0	0	0.1518	0	0
0	0	0	0	0	0	0.6723
0	0	0	0	0	0	0
0.5230	0.4744	0	0	0	0.9488	0
	0	0	0	0	0	0

Q0 =

0.0736	0.9786	0.0007	0.9263	0.0502	0.0298	0.0195
0.0001	0.9820	0.1680	0.0003	0.9820		

Q1 =

0.9264	0.0214	0.9993	0.0737	0.9498	0.9702	0.9805
0.9999	0.0180	0.8320	0.9997	0.0180		

output =

1	0	1	0	1	1	1	1	0	1	1	0
---	---	---	---	---	---	---	---	---	---	---	---

It took 4 number of iterations
diary off