

n	Estimate at n	Reciprocal
1	0.33845	2.9547
2	0.88235	1.1333
3	1.0414	0.96026
4	1.0684	0.93595
5	1.0652	0.9388
6	1.0658	0.93828
7	1.0657	0.93835
8	1.0657	0.93834
9	1.0657	0.93834
10	1.0657	0.93834

The approximate eigenvalue of A nearest to $q=1$ is 0.93834