Console

$$q(1) = 3.0000$$
 $a = 7.0000$ Scaled $q(1) = 0.4286$ 7.0000 1

$$q(2) = 2.4286$$
 $a = 5.2857$ Scaled $q(2) = 0.4595$ 5.2857 1

$$q(3) = 2.4595$$
 $a = 5.3784$ Scaled $q(3) = 0.4573$ 5.3784 1

$$q(4) = 2.4573$$
 $a = 5.3719$ Scaled $q(4) = 0.4574$ 1

$$q(5) = 2.4574$$
 $a = 5.3723$ Scaled $q(5) = 0.4574$ 5.3723 1

Hence the largest eigenvalue is 5.3723 with the corresponding eigenvector as 0.45