Consumers in a certain state can choose between three long-distance telephone services: GTT, NCJ, and Dash. Aggressive marketing by all three companies results in a continual shift of customers among the three services. Each year, GTT loses 5% of its customers to NCJ and 20% to Dash, NCJ loses 15% of its customers to GTT and 10% to Dash, and Dash loses 5% of its customers to GTT and 10% to NCJ.

a. Set up the transition matrix.

b. If GTT currently has 24% of the market, NCJ has 36%, and Dash has 40%, assuming these percentages remain valid for a long period of time, what is each company's expected market share in the long run?

c. If GTT currently has 12% of the market, NCJ has 47%, and Dash has 41%, assuming these percentages remain valid for a long period of time, what is each company's expected market share in the long run?