

NAME _____

1. Two brands of a product are available - Brand A and Brand B. Of those who buy Brand A, 80% will buy it the next time. Of those who buy Brand B, 40% will buy it the next time.

A. Construct the **transition matrix** for this situation.

B. Suppose that people tend to buy this product every week and that this week, 30% of the people buy Brand A and the rest buy Brand B. What is the **initial-state distribution matrix** for this situation?

C. What percentage will buy Brand A next week? Indicate the matrix multiplication you performed.

D. What percentage will buy Brand A the week after next? Indicate the matrix multiplication you performed.