

Name: _____
Group Members Present: _____

Grade: _____

_____, _____, & _____

1. In 1994, Charles Schwab had approximately \$135 billion of assets in customer accounts. Throughout the late 1990s that value grew by approximately 39% per year.

a. Write an exponential model for Schwab's customer account assets in the late 1990s.

b. Use the model to estimate Schwab's customer account assets in 2000.

2. $A(t) = 2.3(4.652)^t$ million customers gives the customer base of Amazon.com in the late 1990s where t is the number of years since 1998.

a. Calculate $A(2)$. Write a sentence interpreting the result.

b. What is the percentage change of the exponential function A ?

c. Write the following sentence in function notation: "In 1998, the customer base for Amazon.com was 2,300,000."

3. The table gives the population of the United States.

Year	1790	1791	1792	1793	1794
U.S. Population (thousand people)	3926	4056	4194	4332	4469

- a. Write an exponential model for U.S. population given the number of years since 1790.
- b. What is the percentage change for the model?
- c. Use the model to calculate the population of the United States in 1804.
- d. Is the result in part c. extrapolation or interpolation?
- e. The actual population of the United States in 1804 was 6,065,000. Is the estimate from the model an over-estimate or an underestimate of the actual?