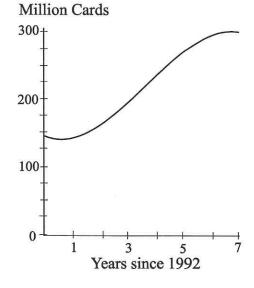
5e Calculus Concepts LaTorre, et al.

## Learning Activity 2.1 page 1 of 2

Change, AveROC, %Change

Name: \_\_\_\_\_ Grade: \_\_\_\_\_
Group Members Present:

- 1. The graph shows the number of Visa credit cards.
  - a. Estimate (to the nearest ten millions) the number of Visa cards for 1987 and 1992.
  - b. Calculate the change in the number of Visa cards between 1987 and 1992. Interpret the result.



- c. Draw the line whose slope represents the average rate of change between 1987 and 1992. This line is called a\_\_\_\_\_\_ line.
- d. Calculate the slope of the line drawn in part c. Interpret the result.

e. What behavior of the graph between 1987 and 1992 does the secant line not indicate?

## **Learning Activity** 2.1 page 2 of 2

Change, AveROC, %Change

2. The table shows U.S. imports of natural gas for selected years.

Year	1970	1975	1980	1985	1990
Natural gas imports (billion cubic feet)	821	953	985	950	1532

Calculate the change in natural gas imports during the following periods.

1970 - 1980

1980 - 1990

b. Calculate the average rate of change in natural gas imports during the following periods.

1970 - 1980

1980 - 1990

Calculate the percentage change in natural gas imports during the following periods.

1970 - 1980

1980 - 1990

d. What behavior of the data between 1980 and 1990 is not indicated by the average rate of change between those years?