## Task Model Data from Statistics Canada

## Part A: Model the Energy Use of Canada's Business Sector

Go to the E-STAT Web site at *http://www.statcan.ca/start.html*.

- Click on Search CANSIM.
- Type **153-0032** in the search box.
- Click on **Business Sector**.
- Select 1993 to 2000 as the Reference Period.
- Click on retrieve as individual time-series.
- If you plan to use a spreadsheet:
- Click time as rows under CSV and retrieve now.
- Save the information, and open the file.

• If you plan to use a graphing calculator:

- Select HTML, series listed individually: As is (no annual figure). Click on retrieve now.
- Copy the year and energy use data into the lists on the calculator.

**1.** a) Determine which attribute should go on which axis and graph the data.

- b) Use regression to determine a linear, quadratic, and exponential model for the data.
- c) Which model is most appropriate? Explain your reasoning.

**2.** a) Describe and interpret the graph.

**b)** Do you think the trend in the graph will continue? Explain.

## Part B: Model the Amount of Canada's Federal Debt

Return to Search CANSIM.

- Type **385-0010** in the search box.
- Click on Gross Federal Government Debt.
- Select **1955** to **1997** as the Reference Period.
- Click on retrieve as individual time-series.
- If you plan to use a spreadsheet:
- Click time as rows under CSV and retrieve now.
- Save the information, and open the file.

• If you plan to use a graphing calculator:

- Select HTML, series listed individually: As is (no annual figure). Click on retrieve now.

- Copy the year and energy use data into the lists on the calculator.

**3.** a) Determine which attribute should go on which axis and graph the data.

- **b**) Use regression to determine a linear, quadratic, and exponential model for the data.
- c) Which model is most appropriate? Explain your reasoning.

**4. a)** Describe and interpret the graph.

**b)** Do you think the trend in the graph will continue? Explain.

## **Part C: Model the Birth Rate for Women 40 Years of Age and Over** Return to **Search CANSIM**.

- Type **106-9002** in the search box.
- · Click on Canada, place of residence of females.
- Select **1955** to **1997** as the Reference Period.
- Click on Canada, place of residence of females.
- Choose **40 years and over** from the age group menu.
- Choose live births from pregnancy outcomes.
- Choose number of events from characteristics.
- Select 1974 to 1999 as the Reference Period.
- Click on retrieve as individual time-series.
- If you plan to use a spreadsheet:
- Click time as rows under CSV and retrieve now.
- Save the information, and open the file.
- If you plan to use a graphing calculator:
- Select HTML, series listed individually: As is (no annual figure). Click on retrieve now.
- Copy the year and energy use data into the lists on the calculator.
- 5. a) Determine which attribute should go on which axis and graph the data.
- b) Use regression to determine a linear, quadratic, and exponential model for the data.
- c) Which model is most appropriate? Explain your reasoning.

**6.** a) Describe and interpret the graph.

**b)** Do you think the trend in the graph will continue? Explain.