

Name: \_\_\_\_\_

## LAB: Exponential Functions

You will collect data from Statistics Canada to complete the following lab. There will be 3 students assigned to each computer. However, each student will be given a different topic to research. Therefore, you are all responsible to hand-in this sheet and your own answer sheet(s). This lab will be counted in the thinking category-15marks.

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### Question to Investigate:

Statistics Canada is a government agency that collects and analyzes data about many aspects of life in Canada. On their Web site, [www.statcan.ca](http://www.statcan.ca), you can find the population of the provinces for the last few years. You will be assigned a specific province from the teacher. Then copy and complete the chart below using the data from the web site. Count the time intervals from the first entry in your chart.

Year	Time intervals	Population

/5

Once your chart is complete, you may return to your desk to answer the following questions.

1. With a graphing calculator, draw a scatter plot of the data. Remember to include the scale and the labels on the axes.

/3

2. Using the exponential regression calculation in the graphing calculator, determine the equation to three decimal places.

/3

3. Using your mathematical model, estimate the population of that province in 1900.

/2

4. Predict when the population of that province will be 10% greater than its current level.

/2