



Problem 1 – Exponential Growth

When Connor was born, his parents put \$1,000 dollars into an account to give him as a present on his 21st birthday. However, his parents forgot the yearly interest rate on the account. The table on page 1.3 shows the value of the account for each year. Graph the data on page 1.4 and determine a function for the growth of Connor's money.

Examine the data table on page 1.3. You will graph this data on page 1.4.

On page 1.4, you need to select the variables for the horizontal and vertical axis. Move the cursor to the 'click to add variable' box on the bottom and left of the page and press **enter**. Select the correct variable and press **enter**.

Use the data or the graph to determine the interest rate for the growth of Connor's money. Plug the interest rate into the interest formula and plot the function by selecting **MENU > Analyze > Plot function**.

The equation for the data is: _____

Problem 2 – Logarithmic Growth

Scientists are testing the amount of greenhouse gases present at a research site near the north pole to determine the affect on polar ice melting. The results for a given area around the research site are given in the table on page 2.2. Graph the data on page 2.3 and determine a logarithmic equation to model the data.

Use the data or the graph to determine the correct base for the logarithmic function that models the data and plot the function using **Analyze > Plot function**.

The equation for the data is: _____

Extension Problem – Exponential Decay

Due to an environmental spill, a farmer is losing the amount of land on which he can plant crops. The table on page 3.2 shows the amount of useable land for each year. Determine an equation that models the amount of land the farmer can use each year.

Examine the data table on page 3.2. You will graph this data on page 3.3.

Use the data or the graph to determine the correct base for the exponential decay function that models the data and plot the function using **Analyze > Plot function**.

The equation for the data is: _____