
Email your files to amohr@nebrwesleyan.edu by 11:59 pm on the due date. If you have additional written work to show, bring that with you to the next class period.

Financial Predictions

Use your preferred spreadsheet software to complete questions 1 - 16 starting on page 466 in your textbook. The spreadsheet file should include the scatter plot together with your chosen regression function. The hand-written portion should contain the requested yearly and total sales forecasts with all work present. For example, suppose your data begins in the year 1993 and the regression function is $f(x) = 2e^{0.1x}$ (in millions per year). If you are forecasting for the sales 2010, you should submit

$$\begin{aligned} f(17) &= 2e^{0.1 \cdot 17} \\ &\approx 10.95 \text{ million dollars.} \end{aligned}$$

If you want the total sales from 2000 to 2020 for the same function, you should submit

$$\begin{aligned} \int_7^{27} 2e^{0.1x} dx &= [20e^{0.1x}]_7^{27} \\ &= 20e^{0.1 \cdot 27} - 20e^{0.1 \cdot 7} \\ &\approx 257.32 \text{ million dollars.} \end{aligned}$$

You may use WolframAlpha to compute the antiderivatives, but you should write them down as I have done in the example.