Writing Assignment for LAB 8

There were a number of questions in LAB 8 that you are required to work through (see below) that should now be incorporated into a "cohesive" written assignment.

(2) Provide an algebraic analysis of the data in order to generate an exponential equation that models the data set and fits the context of the data. Show/explain the analysis that leads to your conclusion. How can you confirm/verify that your equation is "correct"?

(3) Rewrite your equation using the natural base e. Show the algebraic analysis that leads to your answer.

(4) Graph the equation you just developed and show the function as well as the data set. Explain how well the equation does/doesn't fit the data. Offer explanations as to why/why not.

(5) Use your model to predict the temperature of the coffee at a time of 30 minutes. 60 minutes. 180 minutes.

(6) At what time will the temperature of the coffee be 50°C? 26°C? Show an algebraic solution.

(7) How well does the function fit the data?

(8) At what rate (°C per minute) is the coffee cooling? Show/explain the analysis that leads to your conclusion.

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For your WRITING ASSIGNMENT (or Math ESSAY if you wish), you are required to prepare an ESSAY that encompasses the following three components:

PART 1 ⇒ You will write an Intro Paragraph, wherein you introduce the problem, discuss some of the parameters/constraints on the problem and outline a brief strategy for how you plan on addressing the problem. MAX LENGTH of this part: One paragraph

PART 2 ⇒ Through the use of explanations, mathematics and graphs, outline your solution to the problem: i.e. how did you come up with a function that models the relationship between temperature and time.

Secondly, you should discuss how do you know the model "works" within the parameters given.

This section MUST include:

(a) Showing your math & algebra
(b) text/explanations wherein you describe/explain what was done and how it was done
(c) Graphs/visuals/data tables involved in your solution
(d) Your analysis of the process and/or the results

MAX LENGTH of this part: three (3) pages

PART 3 ⇒ You will write a concluding paragraph, wherein you summarize your solution to the problem and acknowledge any problems/issues/constraints/extensions of the method you used to solve the problem. MAX LENGTH of this part: One paragraph

Finally, you will share/email/print your solution and turn it in for grading.

RESOURCES available:

(a) Your work you've already done on the problem, which should be in your notebook,
(b) Graphing calculator
(c) DESMOS
(d) Internet
(e) Your BRAINS!!

Writing Assignment for LAB 8

Here is a sample of the scoring "checklist" that I will use to score/grade/judge your finished product:

Criteria	Approaching "standard"	Meeting "standard"	Exceeding "standard"
PART 1: Introduction: Includes reference to context and to problem Gives me an idea of what math and discussion I can expect in your work Introduces the problem solving method that will be used to address the problem Well written, clear, concise			
PART 2: The Method & the Math The method(s) and strategies used are addressed and are clear There are textual explanations in your work as you explain the what and the why of what you are doing When and where appropriate, you show the critical steps and results of your mathematical processes When and where appropriate, your results & data are presented on a properly presented data table When and where appropriate, graphs are included to illustrate/show your workings and results When and where appropriate, you reflect upon the process and the results			
PART 3: Conclusion: Relates the final answer(s) back to the problem Discusses the merits of the problem solving strategy that was used Addresses one or two extensions of the problem/strategy/context/concepts …. Well written, clear, concise			