Homework 3

Calculus I, Section 004

Due Monday, October 1 at 7:00 PM

Problems (From Chapter 2 of Stewart). Please write solutions to the following problems:

Section 7: 24, 26, 59, 60. For problems 59 and 60, explain your answer.
Section 8: 4, 8, 62. For problems 4 and 8, you will have to read Example 1 in this section of the book.

Challenge Problem. Can there be a function $f$ all of whose derivatives are positive everywhere? What if $\lim_{x \to -\infty} f(x) = \infty$? Explain your reasoning.

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Homework guidelines, from the syllabus: Please write your name clearly on your homework, and please staple multiple pages. To receive full credit, you must show your work and justify your answers. Please turn in your homework to the box outside the lecture hall. All problems (including “challenge problems”) are weighted equally. Challenge problems will be significantly more difficult than the rest of the homework, and you should not worry if you do not solve them.