

18.100B Problem Set 6

Due in class Monday, April 6. You may discuss the problems with other students, but you should write solutions entirely on your own.

1. Give a proof or a counterexample for the following assertion: suppose that f is a real-valued differentiable function on the interval $(-1,1)$, and that $f'(0) = 1$. Then there is an $\epsilon > 0$ so that f is strictly increasing on the interval $(-\epsilon, \epsilon)$.

2. Text, page 114, number 4.
3. Text, page 115, number 9.
4. Text, page 117, number 22.
5. Text, page 119, number 26.