# Written Homework Problems §2.4
## 8 problems for 16 points

§2.4 # 133, 135, 137, 143, 153, 154

**Problem A:** Find the value(s) of $k$ that makes the function $f(x) = \begin{cases} 2x & x \leq 5 \\ x^2 + k & x > 5 \end{cases}$ continuous for all real numbers.

**Problem B:** For what $x$-values, if any, is the function $f(x) = \begin{cases} e^x & x \neq 0 \\ 2 & x = 2 \end{cases}$ discontinuous. *Justify* your answer.