Homework Assignment for Week 03

1. Section 10.8: Problems 7, 9, 29, 33, 35, 41.

2. Let
$$f(x) = \begin{cases} 0, & x = 0 \\ e^{-1/x^2}, & x \neq 0 \end{cases}$$
   it is known that $f^{(n)}(0) = 0$ for all n. Verify this for $f'(0)$ and $f''(0)$.

3. Section 10.9: Problems 7, 9, 17, 19, 33, 41, 42, 50(a).