Study guide for quiz 03

Quiz problems include both the lecture contents and homework problems.

1. Section 2.6: Study definition of the limits in p119, p125, p131 and Homework 03, problem 2. Make up an example for each definition and practice proving with these definitions.

2. Section 2.6: SKIP the asymptotes part.

3. Section 3.2: Study the definition of derivative, one-sided derivatives, and relation between differentiability and continuity (Theorem 1 and proof).

4. Section 3.3: Study derivative product rule, derivative quotient rule and applications such as

$$\frac{d^n}{dx^n}\big(f(x)g(x)\big) =?, \qquad \frac{d}{dx}\big(f_1(x)f_2(x)\cdots f_n(x)\big) =?$$

and derivative of determinants, etc.