

## Study guide for quiz 06

Quiz problems include both the lecture contents and homework problems.

1. Section 4.4: Review procedures for sketching a curve, such as how to determine whether the curve is increasing/decreasing and concave up/down, how to find local extremes and points reflection, etc.
2. Section 4.5: Review how to determine a indeterminate form using L'Hôpital's Rule. Go through all examples in section 4.5. Find one example to each of the form  $\infty - \infty$ ,  $0 \cdot \infty$ ,  $1^\infty$ ,  $0^0$ ,  $\infty^0$  and study how to find the limit by L'Hôpital's Rule.
3. Section 4.5: Find an example of the form  $\frac{0}{0}$  that L'Hôpital's Rule does not leads to an answer, but after rewriting  $\frac{0}{0} = \frac{\frac{1}{0}}{\frac{1}{0}} = \frac{\infty}{\infty}$  (or vice versa), L'Hôpital's Rule can be applied to find the limit.