

## Study guide for quiz 10

Quiz problems include both the lecture contents and homework problems.

1. Section 7.3: Memorize the definitions of the six hyperbolic functions. Study the graph of  $\sinh$ ,  $\cosh$  and  $\tanh$ . Derive and memorize the derivative of the six hyperbolic functions. Skip the "inverse hyperbolic function" part.
2. Section 7.4: Study the meaning of 'little  $o$ ' and 'Big  $O$ '. Write a few examples for both. Study the standard examples such as logarithm functions, polynomials and exponential functions and how to find the relative growth rates among them (ie. which one grows fastest, which one slowest). Also memorize the results.
3. Section 8.2: Practice integration by parts. Go through the examples in textbook and homework problems. Pay attention to the cases where the result requires integration by parts more than once.