Study guide for quiz 04

Quiz problems include both the lecture contents and homework problems.

1. Section 3.5: Review the definitions and algebraic identities of trigonometric functions listed in page 1-2 of Lecture 07. Study the derivation of $\dfrac{d}{dx}\sin x$, $\dfrac{d}{dx}\cos x$ and memorize the derivatives of all six trigonometric functions.

2. Section 3.6: Practice on derivative of composite functions: $\frac{d}{dx}f_1(f_2(\cdots f_n(x)))$ where the functions $f_1, f_2, \cdots f_n$ are elementary functions such as polynomials, trigonometric functions, exponential functions or their combinations.

3. Section 3.7: Study how to find derivative of a function through implicit differentiation. Also study higher order derivatives. In other words, how to find $\dfrac{d^n}{dx^n}f(x)$, when the function $y = f(x)$ is defined implicitly through $\{(x,y)|F(x,y) = 0\}$ with a given function F.