Part I (due at the beginning of class Wednesday, January 10)

Read the syllabus and write down your questions about it. Then, in OpenStax Calculus Volume 1 (`https://cnx.org/contents/i4nRcikn@2.66:TjgBKRr3@5`), read the Hyperbolic Functions subsection of Section 1.5 (you can search the book at the top of the webpage for "hyperbolic functions" to find it or just go to section 1.5 by clicking on "Contents" to the left of the search bar and scroll down until you get to the big "Hyperbolic Functions" heading). Ignore the claims about how the hyperbolic functions are pronounced. Stop reading when you get to the Section 1.5 Exercises.

Remember that what you turn in for Part I should have 3 parts, as mentioned in the syllabus:

(a) Your responses to the reading questions below.

(b) Your own questions/comments on the reading.

(c) The amount of time you spent on Part I (including the time spent reading).

Reading Questions

1. Write down your questions on the syllabus/course.
2. The textbook claims that the identities involving hyperbolic functions are analagous to trigonometric identities. Which are the same, and which are different?
3. Do you remember what it means to say a function is one-to-one? If so, explain; if not, look it up and write down the definition you find. Then answer this question: why do we care if a function is one-to-one when we're talking about inverse functions?

Part II: Exercises (prepare for class Wednesday, January 10)

1. Using the definition of $\cosh x$, show that $\cosh(-x) = \cosh x$ (i.e., plug $-x$ into the exponential version of $\cosh x$ and work out what happens).
2. Using the definitions, show that $\cosh x + \sinh x = e^x$.
3. Knowing that $(\sinh x)' = \cosh x$, $(\cosh x)' = \sinh x$, and $\tanh x = \dfrac{\sinh x}{\cosh x}$, find the derivative of $\tanh x$.

Part III: Homework Problems (due Wednesday, January 17 at the beginning of class)

No Part III problems yet.