Part I (due at the beginning of class Thursday, November 13)

Try problems 33 and 34 from the Derivatives handout.

Part II: Problems (due at the beginning of class Tuesday, November 18)

1. Suppose f is a one-to-one and differentiable function and its inverse function f^{-1} is also differentiable.

   (a) Find the derivative of f^{-1} by first setting $y = f^{-1}(x)$ and then doing similar things as we did with $\arcsin x$.

   (b) Suppose $f(4) = 5$ and $f'(4) = \dfrac{2}{3}$. Using your result from part (a), find $(f^{-1})'(5)$.

Self Evaluation #2 (due Thursday, November 13)

This self evaluation is a place for you to think about the course and your own work in the course in a more holistic manner than just doing a problem set. As such, please write about your learning in this class and reflect on your learning in light of the following statements inspired by practices encouraged in mathematics. Where have you seen yourself growing in relation to these practices in this class, and where do you hope to continue to grow throughout the rest of the semester?

1. I can write clear solutions to mathematical problems.

2. I can work effectively with others, listening to their ideas and giving and accepting constructive feedback.

3. I can reflect on my own learning and identify strengths and weaknesses in my understanding.

4. I can persevere in solving problems.

5. I can make connections among mathematical thinking in calculus, Christian faith, and problems in the world.

When you turn in your reflection, also make an appointment for a conversation with me about it during the week of November 18–22. Note that if you want to meet on Monday, you'll need to turn in your completed evaluation at least an hour before we meet.