

Extra Written Problem

If you choose to do this assignment, your score will replace your lowest scoring written assignment. If you choose not to do this assignment, your scores will remain the same. This will be due at the beginning of class on **Friday, March 7**, the last day of classes. **NO LATE ASSIGNMENTS WILL BE ACCEPTED!**

Use whatever integration techniques are helpful to show that

$$\int \frac{e^x}{\sqrt{4 + e^{-2x}}} dx = \frac{1}{4} e^x \sqrt{e^{-2x} + 4} + C.$$

The answer is given to you, so you can't get any points for getting the correct answer. Show all your steps clearly. Explain why you chose the methods you did. If you try something that doesn't work, include it in the write-up of your final solution. Don't show all the work that made you decide you needed a different method. Just say something like: *I tried a substitution of $u = \sin^2 x$, but this lead to an integral that wasn't any easier. Using $u = \sin x$ works much better*, and then proceed, showing all your steps.