

## HOMEWORK 1

MATH 243

8.1.43

Set up the definite integral by hand and use a calculator or computer to evaluate it. Make sure that your work makes it abundantly clear what expression you asked the computer to evaluate and what the computer told you. Also, don't forget to start by doing the "verify" part of the problem.

8.1.44

**(a).** Do this part by hand, expressing your answer in terms of the constants  $a$ ,  $b$ , and  $c$ .

Some Calculus I/II classes don't cover the hyperbolic sine and cosine functions. If that's the case:

- The hyperbolic sine and cosine functions sound way scarier than they are. They're easier than the regular sine and cosine functions.
- Your textbook, Wikipedia, your friends, and office hours are all good resources for learning everything about them.
- You don't need to learn everything about them to solve this problem. Three relevant facts are all you need.

**(b).** You can use a calculator or a computer for this part. You'll need it throughout. Once you get your answer, put it in context.