

CLS Homework #10 Notes and Common Errors

Homework Due: 19 April 2019

Problems Graded: 5.2.1achmq, 5.2.4, 5.3.1

- General Notes -

1. This homework went alright overall. As a note for the last homework assignment and for the final, please remember to be extra careful with your algebra. All of you are good at it at this point, but it's still very easy to make mistakes.

- Problem 5.2.1 -

1. The only problem that I saw a lot of was in part (q). For this one, you were asked to take

$$\int \frac{1}{1 + 4y^2} dy.$$

The trick to this one was to recognize that you could rewrite this as

$$\int \frac{1}{1 + (2y)^2} dy.$$

Then you can take $u = 2y$ which gives you $\frac{1}{2}du = dy$. Taking the integral, you will then find that the answer is $\frac{1}{2} \arctan(2y) + C$.

- Problem 5.2.4 -

1. Most people did the integration part of this question correctly, but had some troubles on getting a closed formula for y . The homework solutions have a good walk through on how to do this problem, so if you have questions, first look at that and then you can email me if there is anything else that was confusing.

- Problem 5.3.1 -

1. Again, most people did okay on the first couple of steps of this problem, but then tripped up on the algebra portion. Take a look at the solution on the website and let me know if you have questions.