

# PHYS:4761 Homework #6

Reading: Read Arfken, Weber, & Harris, Chapter 5, Sections 5.1–5.5 (p.251–291)

Due at the beginning of class, Thursday, October 12, 2023.

## Homework Problems:

1. (15 pts) Chapter 5, Exercise 5.1.5

HINT: For part (a), use the first form of  $f(x)$  and integrate to obtain the middle form of the answer you are intended to prove; use the second form of  $f(x)$  and integrate to obtain the rightmost form of the answer you are intended to prove.

2. (15 pts) Chapter 5, Exercise 5.1.8

3. (15 pts) Chapter 5, Exercise 5.2.2

4. (15 pts) Chapter 5, Exercise 5.2.4

5. (10 pts) Chapter 5, Exercise 5.2.8

6. (5 pts) Chapter 5, Exercise 5.3.1

7. (15 pts) Chapter 5, Exercise 5.3.3

8. (10 pts) Chapter 5, Exercise 5.4.4