

# Homework 5

Math 330

due at 5pm on Thursday, October 26, 2023

Solve the following problems and communicate your solutions clearly. Explain your work using complete sentences, and include diagrams as appropriate.

For this homework, you must type your solutions to all of these problems in  $\text{\LaTeX}$ . Plots/graphs may be drawn by hand or using technology and inserted into your  $\text{\LaTeX}$  document. Make sure your solutions are easy to read, in order, and clearly labeled. Upload a single file containing your solutions to the [Homework 5](#) assignment on Moodle.

1. (4 points) Exercise 3.3.1

2. (3 points) Exercise 3.3.2

3. (4 points) Exercise 3.4.1

4. (5 points) Exercise 4.1.2

Note that this problem is not asking you to solve for  $u(t, x)$ .

5. (4 points) Exercise 4.1.3

6. (5 points) Exercise 4.1.6

7. (5 points) Exercise 4.1.8