MATH 203 Calculus III
Homework 3

Basic Information

This assignment is due on Gradescope by **3 PM on Friday, September 13**.

Make sure you understand MHC honor code and have carefully read and understood the additional information on the class syllabus. I am happy to discuss any questions or concerns you have!

Since this is a 200-level mathematics course, quite a few homework questions will ask you to explain your reasoning or process for solving a problem. Whenever possible, write your explanations in complete sentences and write your answers as if you were explaining to a peer in the class.

The homework problems will be graded anonymously so please do not put your name or other identifying information on the pages.

Turn In Problems

- Suppose that $\vec{v}$ and $\vec{w}$ are nonzero vectors. Explain what circumstances would give us that each of the following are true (consider (a) and (b) separately). Be as complete with your answer as possible.
  - (a) $||\text{proj}_{\vec{v}}\vec{w}|| = ||\text{proj}_{\vec{w}}\vec{v}||$
  - (b) $\text{proj}_{\vec{v}}\vec{w} = \text{proj}_{\vec{w}}\vec{v}$
- 10.2: 14, 18
- 10.3: 8, 10, 18, 22
- 10.4: 8

Additional Problems (to do on your own, not to turn in)

- 10.2: 13, 17, 25
- 10.3: 9, 17, 21
- 10.4: 7