

MATH 203 Calculus III

Homework 8

Basic Information

This assignment is due on Gradescope by **3 PM on Friday, October 4**.

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

- 12.3: 8, 12, 18, 26, 28
- 12.7: 20
- #7. Find the tangent plane of the function $f(x, y) = \sqrt{20 - x^2 - 7y^2}$ at $(2, 1)$ and use the tangent plane to approximate $f(1.95, 1.08)$
- #8. On the next page are three surfaces, labeled a , b , and c . One of the graphs is a function f and the other two are graphs of the partial derivatives f_x and f_y . Determine which surface is which, and give reasons for your choices.

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

- 12.3: 7, 11, 15, 17, 27
- 12.7: 19

