

MATH 202: VECTOR CALCULUS
EXAM 1 REVIEW

For the first exam, you are responsible for the content covered in class and our reading assignments through Monday, February 19.

The exam is a take-home 120-minute exam. You must take the exam on your own in a distraction-free environment. The time you spend on the exam must be continuous, not broken into multiple pieces. You may reference one two-sided sheet of notes (US letter size or A4 paper). No other resources (including books, other notes, calculators, phones, computers, or consultation with other individuals) are permitted.

The following problems are for practice and are intended to help you review for the exam. They are not to be turned in and will not be graded, though I am happy to provide feedback if you have questions about a solution. **One of these problems will appear on the exam.**

Recommended review problems. CAES 2.2.6, 2.3.6, 2.4.4, 3.6.8, 3.6.9, 3.10.6, 4.2.4, 4.3.3, 4.4.5, 4.5.4, 4.6.6, 4.7.7. Additionally, find the tangent hyperplane to the graph of $f(x, y, z) = xyz + x^2$ at the point $(2, 0, -3)$. At this point, to which variable is the output of the function most “sensitive” and why?