

240 - Calculus III: Test 2 Study Guide

Henson - Fall 09

TEST 2 TOPICS:

* You may bring to the test a 3×5 notecard with notes front and back!

**Make sure to know all derivative rules and integration techniques from Calc I and II. This is where students usually lose the most test points!

1. Graph vector valued functions.
2. Differentiate vector valued functions.
3. Integrate vector valued functions (definite and indefinite integrals).
4. Compute the constant of integration (which is a vector).
5. Compute the norm of a vector valued function.
6. Compute the dot product of a vector valued function.
7. Graph a vector valued function in a plane (2D) or in space (3D).
8. Compute velocity and acceleration vectors for a position function.
9. Compute the tangent and normal vectors for a position function.
10. Compute the arc length of a vector valued function over a closed interval.
11. Compute the curvature of a vector valued function.
12. The formula concerning the position of a projectile.

**Course Competency Problem: There will be one application problem concerning the position of a projectile.