

Mathematics 2243: Calculus III

Information about Exam I

Exam I will take place in our usual classroom. Rather than taking your usual seat, you will need to sit so that there is no one on either side of you.

Calculators may not be used. Scratch paper will be provided, so all you will need is something to write with.

The exam will be worth 50 points, and will cover sections 3.5, 6.3, 6.5, 10.5, 10.6, 10.7, 11.1, and 11.2. In addition to the 50 points, there are up to 3 bonus points. The *approximate* point breakdown by section of the text is as follows:

3.5	6
6.3	6
6.5	6
10.5, 10.6	9
10.7	4
11.1	10
11.2	9
(bonus)	3
Total	53

The following topics will definitely be covered (of course, the exam is not limited to these topics):

1. tangent line slopes to parametric curves, arclength and surface area in parametric contexts
2. polar coordinates, tangent line slopes, finding area inside a polar curve
3. sequences, finding limits, convergence behavior of n^p and r^n
4. convergence of series, geometric series, test for divergence

You should know how to find ds for a parametric curve, but do not need to memorize the formula for ds in polar coordinates.