

Review topics for the 1352 Final Examination

- Area between curves
- Volume of a solid of revolution (by both shell and washer methods)
- Computing area of a planar domain in polar coordinates
- Arc length in rectangular coordinates
- Some physical application involving force or work
- Integration by parts
- Integration with trig substitution
- Integration involving u-substitution
- Integration involving partial fractions
- Improper integral
- Sequences
- Series (e.g., a geometric series, telescoping series, an application of the generalized ratio or root test)
- Determine the interval of convergence or the radius of convergence for some power series
- A Maclaurin series (e.g., based on exponential function or sin or cos or $1/(1+x)$, etc.)
- Three problems involving vectors (e.g., volume of a parallelepiped, direction cosines, and finding a plane perpendicular to a given line)

25 problems total

Reminder: no calculators, no formula sheet.