MATH 1512 — REVIEW EXAM 4 (Lectures 33-38)

Below is a list of the types of problems, with some examples. Go through the homework sets 13-15.

No calculators.

APPLICATIONS

- Concept question: How do you find the average value of a function f(t) over an interval $t \in [a, b]$? Precisely what are the steps you have to take?
- Compute areas between curves.
- Compute integrals of functions defined piecewise.
- o Compute average values of functions, including functions defined piecewise.
- Find volumes of solids of revolution, including problems where the function is not given, such as volume of torus, cap of a sphere. Set up the volume as an integral using either the method of slices (disks/washer) or shell.
- o Given a force, express work as an integral.

Note: MVT is not on the exam.

You should practice by reviewing the homework problems in HW 12-14. For each topic above, find a problem in the homework that addresses it.