

MATH112Z CALCULUS II, FALL 2019
FINAL REVIEW

The final exam is cumulative. It covers topics in Midterm 1–3 plus Sections 10.1–10.4.

- (1) Carefully go over Midterm Review 1–3.
- (2) Section 10.1: understand parametric equation representation and Cartesian equation for curves; be able to transform between these two representations.
- (3) Section 10.2: for parametric curves, be able to find the tangent line, determine concavity, find area between two curves and arc-length, and find area of surface of revolutions. (It is helpful to compare these with Section 8.1, 8.2)
- (4) Section 10.3: understand the definition of polar coordinates; be able to translate between polar and Cartesian coordinates; understand polar equation for curves; be able to find tangent line for polar curves.
- (5) Section 10.4: be able to find the area bounded by $r = f(\theta)$; be able to find the arc-length in polar coordinates

Some suggestions:

- Make sure you understand all the topics listed above.
- Carefully review practice midterm 1–3 and review all the homework problems. Make sure you know how to solve them correctly. If you are uncertain about your method/solution, please check with me or find helps.