

**MA 341 Exam #2 Review**  
**Exam #2 will be in class on Wednesday, October 17**

1. Read and review the “Log of Class Activities” from the course website through Monday, October 15.
2. Read and review the relevant sections of the “Course Notes” from the course website. You are not responsible for the material that we did not cover. Sections 2.6 (but not the proof of Theorem 2.6.1), Section 3.1 (read through this to be sure this makes sense), Section 3.2, Section 3.3 (just the problems we worked on), Section 3.4, Section 3.5 (but you are not responsible for Problem 3.5.1), Section 3.7, Section 6.1 (read through this to be sure this makes sense), Section 6.2, Section 6.3, Section 6.4, Section 6.5.
3. Read and review all of the homework problems, including solutions posted on the course website.
4. In particular be able to do the following, and problems similar to the following. I may directly ask some questions just like these, but I may also ask related questions that are not exactly like these.
  - (a) Construct the parametric equation of a line given two points (Section 2.6), or given the equation of the line in some other form.
  - (b) Problem 2.6.3.
  - (c) Know and use the distance formula (Section 3.2).
  - (d) Problem 3.2.3 (we did not discuss this in class, but you should be able to do this by writing the parametric form of the line and then substituting  $t = 1/2$ ).
  - (e) Problem 3.2.4.
  - (f) Explain how the arc length formula of calculus is derived from the distance formula.
  - (g) Problem 3.3.23.
  - (h) Problem 3.3.26.
  - (i) Problem 3.3.27–3.3.29.
  - (j) Problem 3.4.1.
  - (k) Explain the meaning of “1 radian.”
  - (l) Be able to convert from degrees to radians and back.

- (m) Know what the formula for the length of an arc of a circle is, and how to use it.
- (n) Know how to determine the six trigonometric functions for an angle based on the unit circle.
- (o) Problem 6.3.1, parts 1–8.
- (p) Problem 6.3.2–6.3.3.
- (q) Problem 6.3.5.
- (r) Problem 6.3.7–6.3.8.
- (s) Problem 6.4.1–6.4.10.
- (t) Problem 6.5.1–6.5.4.