Math 229: Review for Test 4
(Spring 2019)

Bring your scientific calculator to the exam. (Graphing calculators are not allowed on the test.)

Suggested Review Problems: Most of the test will have problems similar to the review exercises so I STRONGLY encourage you to thoughtfully do these problems. Try to do these problems without looking at your notes and without looking at the answers in the back of the text; i.e., treat the problems as a practice exam.

If, for any of the problems, you have to look at notes or reverse engineer the solution from the answer, then you need to go back and <u>practice more of that type of problem</u>!

        Chapter 10 Review, page 870: 3, 5, 7, 11, 13, 16, 17, 18, 19, 20, 21, 22, 27, 54, 55, 56, 57, 58, 60, 62, 63

                             Page 873: #3

      Whenever possible, **<u>include a sketch</u>** to illustrate the problem and/or solution.

      Even Answers: #16: $r = \dfrac{-2}{\cos\theta}$ #18: $r = -2\sin\theta$

         #20: $4x + y = -2$ #22: x = 5 (vertical line through 5 on the x-axis)

Section 10.1: <u>Law of Sines</u> (formula will be provided but you should memorize it anyway)

      Use when you have a matched angle with an opposite-side.

Section 10.2: <u>Law of Cosines</u> (formula will be provided but you should memorize it anyway)

      Use when you have SSS or SAS.

Section 10.3: Polar Coordinates.
      Memorize the conversion formulas from Rectangular to Polar Form, and vice versa.
      Plot polar coordinates
      Be able to convert from Rectangular and Polar and vice versa.

Section 10.4: Graphs of Polar Functions and Equations
      No memorization is required but you will need to use a general summary of polar equations and their graphs to graph a specific equation. You will need to include a table of (r, theta) values in your graphing work.

Section 10.8: Vectors
- Graph a vector in standard form.
- Distinguish between a vector and a scalar quantity
- Find vector components, given a magnitude and direction.
- Find the magnitude and direction of a vector, using its vector components.
- Add , subtract and find scalar muttiples of vectors. Be able to do this graphically or using components.
- Apply vectors in solving problems involving displacement, velocity, and force.