

MAT 155B - FALL 12 – EXTRA CREDIT ASSIGNMENT

Due date: You have until Dec 12th to complete this assignment.

Question 1. Following the explanation given at the beginning of chapter 10.5, explain what conic sections are.

Question 2. What is the relation between conic sections and parabolas, ellipses and hyperbolas?

Question 3. Following the examples of page 697, do problems 13 and 14 of section 10.5.

Question 4. Following the examples of page 698 and 699, do problems 19 and 22 of section 10.5.

Question 5. Sketch the conic given in polar coordinates by

$$r = \frac{6}{1 + 2 \sin \theta}.$$

(*hint:* this is very similar to example 3 on page 705 of the textbook, just follow the steps there presented).