

**MA 330 ASSIGNMENT**  
***ISLAMIC GEOMETRY AND ESSAY #3***  
**DUE FRIDAY, OCTOBER 31**

**Problem 1:**

Prove that the construction of a parabola given in Example 11.5 on pages 489–490 in *Crest* is valid. Use the definition that a parabola is the solution set to an equation of the form

$$y - a = m(x - b)^2$$

for some real numbers  $a$ ,  $b$ , and  $m$ .

**Essay:**

Write a critical review of Chapter 11 in *Crest of the Peacock*. Imagine that you are writing your review for a journal for undergraduates in mathematics and the sciences. Like any critic, you will respond positively to some things and negatively to others. Unlike many critics, you need to justify your opinions and provide detailed explanations for your claims. Keep in mind that this is a review for a mathematical publication, so you will be graded using our standard rubric — be sure to address the mathematical depth and mathematical style of the chapter in addition to other topics.

This short essay should be equivalent to: typed, 2.5–3 pages long, double spaced, 12 point Times New Roman font.