

MA 308

Exam #3 Review

April 14, 2011

1. Review the Ongoing Course Notes on the course website, <http://www.ms.uky.edu/~lee/ma308sp11/ma308sp11.html>.
2. Review all of the problems worked on in class and on homework. *Be sure you know how to explain the reasoning behind all of the solutions.*
3. Keep in mind that on the exam I may ask questions that are related to the understanding of the problems we examined in class, but are not necessarily exactly the same problems. So understanding the the particular problem solving strategies used in their solution will be important.
4. Know how to solve problems in which quantities are proportional and/or inversely proportional.
5. Know how to solve the Guitar Fret Problem.
6. Know how to carry out reflections, rotations, and translations on figures. Know how to find centers of rotation and reflection lines if you are given two figures related by such motions.
7. Know how to find symmetries of figures and repeating patterns—translations, rotations, reflections, and glide reflections.
8. Know how to construct figures and patterns with specified sets of symmetries.
9. Be able to explain what the result is of composing two reflections in two parallel lines or in two intersecting lines, and why.
10. Be able to prove that a point P is equidistant from two distinct points A, B if and only if P lies on the perpendicular bisector of \overline{AB} .

11. Be able to prove that the three perpendicular bisectors of a triangle meet in a common point that is also the center of the circumcircle.