Stony Brook University
Mathematics Department
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Geometric Structures
MAT 360
March 8, 2014

Short list of theorems for Midterm Exam

Some of the topics listed here will be included (in a rephrased form) in the midterm exam. It will be required to formulate the relevant definitions and theorems, and provide a detailed proofs. Below the word section means a section from the textbook *Kiselev's Geometry*, the word *Isometries* refers to file isometries.pdf.

(1) Congruence tests for triangles section 40.
(2) Tests for parallel lines, section section 73.
(3) Properties of sides and angles in a parallelogram section 85.
(4) The midline theorem sections 93, 94, 95.
(5) Restoring a plane isometry from its restriction to three points, Isometries, Theorem 1.C.
(6) Isometries as compositions of reflections, Isometries, Theorem 1.D
(7) Represtation of a translation as a composition of reflections. Isometries, Theorem 2B.
(8) Classification of plane isometries. Isometries, Theorem 5.A.