

MA 341: Topics in Geometry

Schedule of Topics & Homework

Fall 2011

Aug 24	Day 1 Introduction and a History of Geometry
Aug 26	Day 2 Introduction to Proofs and Axiomatic Method BlackBoard
Aug 29	Day 3 Axiomatic Systems for Geometry BlackBoard
Aug 31	Day 4 1B – Congruent Triangles p 10: 2, 3, 4
Sept 2	Day 5 1C – Angles and Parallel Lines BlackBoard
Sept 5	NO CLASSES – Labor Day
Sept 7	Day 6 1D – Parallelograms pp 17: 1, 2, 3, 4, 7, 10 (Due Sept 14)
Sept 9	Day 7 1E – Area p 23: 1, 2, 3 (Due Sept 14)
Sept 12	Day 8 1F – Circles and Arcs pp 32–33: 1, 2, 3, 9, 11 (Due Sept 19)
Sept 14	Day 9 1G – Polygons in Circles p 38: 1, 2, 3 (Due Sept 21)
Sept 16	Day 10 EXAM 1
Sept 19	Day 11 1H – Similarity pp 48 – 49: 1, 2, 3, 5, 6 (Due Sept 26)
Sept 21	Day 12 2A – The Circumcircle p 55: 1, 3 (Due Sept 28)

Sept 23	Day 13 2B – The Centroid p 59: 1, 2 (Due Sept 30)
Sept 26	Day 14 2C – The Euler Line, Orthocenter, and 9-Point Circle p 66: 1, 2, 3 (Due Oct 3)
Sept 28	Day 15 2D – Computations p 72: 1, 2, 3 (Due Oct 5)
Sept 30	Day 16 2E – The Incircle pp 79: 1, 2, 3, 13, 17 (Due Oct 7)
Oct 3	Day 17 2F – Excircles pp 81 – 82: 1 (Due Oct 10)
Oct 5	Day 18 2G – Morley’s Theorem BlackBoard (Due Oct 12)
Oct 7	Day 19 2H – Optimization in Triangles BlackBoard (Due Oct 14)
Oct 10	Day 20 3A – Simson Lines pp 104: 1, 2, 3 (Due Oct 17)
Oct 12	Day 21 3B – The Butterfly Theorem BlackBoard (Due Oct 17)
Oct 14	Day 22 3C – Cross Ratios p 116: 1, 2 (Due Oct 21)
Oct 17	Day 23 3D – The Radical Axis BlackBoard (Due Oct 24)
Oct 19	Day 24 EXAM 2
Oct 21	Day 25 4A – Ceva’s Theorem pp 130 – 131: 1, 2, 3, 4 (Due Oct 28)
Oct 24	Day 26 4B – Interior and Exterior Cevians pp 135: 1, 2 (Due Oct 31)

Oct 26	Day 27 4C – Ceva’s Theorem and Angles pp 145 – 146: 1, 2 (Due Nov 2)
Oct 28	Day 28 4D – Menelaus’ Theorem pp 153: 1, 2, 3 (Due Nov 4)
Oct 31	Day 29 5A – Vectors; 5B – Vectors & Geometry p 162: 1, 2 (Due Nov 7)
Nov 2	Day 30 5C – Dot Products p 165: 1 (Due Nov 9)
Nov 4	Day 31 6A – Geometric Constructions – Rules p 187: 1, 2, 3, 4, 5 (Due Nov 11)
Nov 7	Day 32 6B – Reconstructing Triangles p 191: 1, 2, 3, 4 (Due Nov 14)
Nov 9	Day 33 6C – Tangents p 196: 1, 2, 3, 4, 5 (Due Nov 14)
Nov 11	Day 34 6D – Three Hard Problems p 203: 1, 2 (Due Nov 18)
Nov 14	Day 35 6E – Constructible Numbers p 208: 1, 2 (Due Nov 21)
Nov 16	Day 36 EXAM 3
Nov 18	Day 37 Loci BlackBoard (Due Nov 30)
Nov 21	Day 38 Ellipse, Hyperbola, and Parabola BlackBoard (Due Nov 30)
Nov 23	NO CLASSES – Thanksgiving Break
Nov 25	NO CLASSES – Thanksgiving Break
Nov 28	Day 39 Reflection Properties & Applications BlackBoard (Due Dec 2)

Nov 30	Day 40 Trigonometry BlackBoard (Due Dec 5)
Dec 2	Day 41 Coordinatization BlackBoard (Due Dec 5)
Dec 5	Day 42 Conics BlackBoard
Dec 7	Day 43 Conics BlackBoard
Dec 9	Day 47 Review
Dec 14	Final Exam: 10:30 AM– 12:30 PM