

# MA 341: Topics in Geometry

## Schedule of Topics & Homework

### Fall 2010

Aug 25	Day 1 Introduction and a History of Geometry
Aug 27	Day 2 Introduction to Proofs and Axiomatic Method BlackBoard
Aug 30	Day 3 1B – Congruent Triangles p 10: 2, 3, 4
Sept 1	Day 4 Web Assignment BlackBoard
Sept 3	Day 5 1C – Angles and Parallel Lines BlackBoard
<b>Sept 6</b>	<b>NO CLASSES – Labor Day</b>
Sept 8	Day 6 1D – Parallelograms pp 17: 1, 2, 3, 4, 7, 10 (Due Sept 15)
Sept 10	Day 7 1E – Area p 23: 1, 2, 3 (Due Sept 15)
Sept 13	Day 8 1F – Circles and Arcs pp 32–33: 3, 5, 8, 9 (Due Sept 17)
Sept 15	Day 9 1G – Polygons in Circles p 38: 1, 2, 3 (Due Sept 22)
Sept 17	Day 10 <b>EXAM 1</b>
Sept 20	Day 11 1H – Similarity pp 48 – 49: 1, 2, 3, 5, 6 (Due Sept 27)
Sept 22	Day 12 2A – The Circumcircle p 55: 1, 3 (Due Sept 29)

Sept 24	Day 13 2B – The Centroid p 59: 1, 2 (Due Oct 1)
Sept 27	Day 14 2C – The Euler Line, Orthocenter, and 9-Point Circle p 66: 1, 2, 3 (Due Oct 4)
Sept 29	Day 15 2D – Computations p 72: 1, 2, 3 (Due Oct 6)
Oct 1	Day 16 2E – The Incircle pp 79: 1, 2, 3, 13, 17 (Due Oct 8)
Oct 4	Day 17 2F – Excircles pp 81 – 82: 1 (Due Oct 11)
Oct 6	Day 18 2G – Morley’s Theorem BlackBoard (Due Oct 13)
Oct 8	Day 19 2H – Optimization in Triangles BlackBoard (Due Oct 15)
Oct 11	Day 20 3A – Simson Lines pp 104: 1, 2, 3 (Due Oct 18)
Oct 13	Day 21 3B – The Butterfly Theorem BlackBoard (Due Oct 18)
Oct 15	Day 22 3C – Cross Ratios p 116: 1, 2 (Due Oct 22)
Oct 18	Day 23 3D – The Radical Axis BlackBoard (Due Oct 25)
Oct 20	Day 24 <b>EXAM 2</b>
Oct 22	Day 25 4A – Ceva’s Theorem pp 130 – 131: 1, 2, 3, 4 (Due Oct 29)
Oct 25	Day 26 4B – Interior and Exterior Cevians pp 135: 1, 2 (Due Nov 1)

Oct 27	Day 27 4C – Ceva’s Theorem and Angles pp 145 – 146: 1, 2 (Due Nov 3)
Oct 29	Day 28 4D – Menelaus’ Theorem pp 153: 1, 2, 3 (Due Nov 5)
Nov 1	Day 29 5A – Vectors; 5B – Vectors & Geometry p 162: 1, 2 (Due Nov 8)
Nov 3	Day 30 5C – Dot Products p 165: 1 (Due Nov 10)
Nov 5	Day 31 6A – Geometric Constructions – Rules p 187: 1, 2, 3, 4, 5 (Due Nov 12)
Nov 8	Day 32 6B – Reconstructing Triangles p 191: 1, 2, 3, 4 (Due Nov 15)
Nov 10	Day 33 6C – Tangents p 196: 1, 2, 3, 4, 5 (Due Nov 15)
Nov 12	Day 34 6D – Three Hard Problems p 203: 1, 2 (Due Nov 19)
Nov 15	Day 35 6E – Constructible Numbers p 208: 1, 2 (Due Nov 22)
Nov 17	Day 36 <b>EXAM 3</b>
Nov 19	Day 37 Hyperbolic Axiom BlackBoard (Due Dec 1)
Nov 22	Day 38 Hyperbolic Metric and Poincaré Model BlackBoard (Due Dec 1)
<b>Nov 24</b>	<b>NO CLASSES – Thanksgiving Break</b>
<b>Nov 26</b>	<b>NO CLASSES – Thanksgiving Break</b>
Nov 29	Day 39 Defect and Area in Hyperbolic Plane BlackBoard (Due Dec 3)

Dec 1	Day 40 Hyperbolic Geometry BlackBoard (Due Dec 6)
Dec 3	Day 41 Hyperbolic Geometry BlackBoard (Due Dec 6)
Dec 6	Day 42 Hyperbolic Geometry BlackBoard
Dec 8	Day 43 Hyperbolic Geometry BlackBoard
Dec 10	Day 47 Review
<b>Dec 15</b>	<b>Final Exam: 1:00 – 3:00 PM</b>