Advanced Geometry
Semester 2 Exam Information and Review

Exam

- Contents from Chapters 7 through 12
- Worth 150 points, about 20% of final semester grade
- Similar in format and difficulty to 1st semester: 60 true/false, always-sometimes-never, and multiple choice (2 points each) and about 6 problems (5 points each) to work out. There are about 8 proofs in the multiple choice section.
- 75 minutes to complete the exam
- Exam date and time are set. Please refer to the academic calendar. The location is to be determined.
- Calculator allowed
- Bring at least 2 sharpened pencils and an eraser

During the Exam

- Start with the work out problems which will be on the back of your scantron sheet. These problems are worth more points and you can earn partial credit.
- Don't get hung up on any one problem. Move on and come back if time allows
- No penalty for guessing
- You may turn your papers in early, but why wouldn't you spend your time checking answers?
- Take the last couple of minutes to make sure you have answered all of the questions on the scantron.
- Have Kleenex with you – you will NOT be allowed out of your seat during the exam unless you are ill.

Ways to Study for the Exam

1. The **ONE BEST THING** you can do outside of what is assigned and the work we will be doing in class is to take **all** of your old quizzes and tests, take a clean sheet of paper and re-work every one of the problems. Just looking at them is NOT going to help you know if you really remember how to do the problems. Bring questions that you might have to class on Friday and Monday as we review.
2. Complete the attached "Write Your Own Exam" outline. This will force you back to each section of the book that we have covered and do some of those problems.
3. Study with a friend. Ask each other questions.
4. Review the outline of topics. Know what each refers to and what type of problem might be asked.
5. End of chapter reviews and self-tests can be helpful, although my experience is that those are pretty basic problems. There are vocabulary lists at the end of each chapter, also.
6. Hand in this packet as you enter the exam room.
7. You will also receive a second packet of problems from practice SAT and ACT tests. Keep these for future study.

Concepts from 2nd Semester*

- Polygons, chapter 7
- Similar polygons, chapter 8
- Ch 9: Pythagorean Theorem
  - Pythagorean Triples and Special Families
- Ch 9: Right triangle trigonometry
  - Remember to check that your calculator is in DEGREE mode!
  - SOH CAH TOA
  - Inverse trig functions on the calculator or the find the angle button, for example
- Circles, chapter 10
- Area, Surface Area, & Volume Unit
  - Area, Ch 11
  - Volume, Ch 12

$\sin A = 1/2$
$A = \arcsin(1/2)$ or
$A = \sin^{-1}(1/2)$ on the calculator

*All notes and assignments are online.

AMDG

Name_____ Ms. Kresovic

Adv Geo – period _____ Sem 2 Exam Review Exam Date:_____Time_____Room_____

❖ **Write Your Own Semester Exam**

Complete the following table with at least 2 problems of medium difficulty (That is problem set B) from each section of the text. If proof was covered in the section, include at least one proof. Write the problem number, copy the problem and the correctly do the work to complete the problem. Check your answer in the back of the book or online. You may attach additional paper if necessary, however please label the problem with the chapter, section, and exercise number.

Course Introduction	
The purposes of proof **1. Verify the truth of the mathematical information** **2. Explain why it is true** **3. Communicate mathematical knowledge** **4. Discover new mathematics** **5. Create an axiomatic system**	
Ch 7: Polygons	
7.1: Triangle Application Theorems	
7.2: Two Proof-Oriented Triangle Theorems	
7.3: Formulas involving	

7.4: Regular Polygons	
Ch 8: Similar Polygons	
8.1: Ratio and Proportion	
8.2: Similarity	
8.3: Methods of Proving Triangles Similar	
8.4: Congruence and Proportions in Similar Triangles	
8.5: Three Theorems Involving Proportions	

Ch 9: Pythagorean Theorem	
9.1: Review of Radicals and Quadratic Equations	
9.2 Introduction to Circles	
9.3: Altitude-on-Hypotenuse Theorems	
9.4: Geometry's Most Elegant Theorem	
9.5 The Distance Formula	
9.6: Families of Right Triangles	
9.7: Special Right Triangles	

9.8: The Pythagorean Theorem and Space Figures	
9.9: Introduction to trigonometry	
9.10: Trig ratios	
Ch 10: Circles	
10.1: The Circle	
10-2: Congruent Chords	
10.3: Arcs of a Circle	

10.4: Secants and Tangents	
10.5: Angles related to a Circle	
10.6: More Angle-Arc Theorems	
10.7: Inscribed and Circumscribed Polygons	
10.8: The Power Theorems	

10-9: Circumference and Arc Length	
Ch 11 & 12: Area, Surface Area, and Volume	
11.1 Understanding area	
11.2 Areas of parallelograms and triangles	
11.3 Area of a trapezoid	
11.4 Areas of kites and related figures	

11.5 Areas of regular polygons	
12.1: Surface area of prisms	
12.2: Surface area of pyramids	
12.3: Surface are of circular solids	

12.4: Volumes of pyramids and cylinders	
12.5: Volume of pyramids and cones	
12.6: Volumes of spheres	