

CP Geometry -- Test 2 Outline (The exam is worth 250 points.)

I. Introduction to Proof

- Be familiar with the puzzles we examined (chess, squares, number patterns)
- Be able to explain these items (chess board especially)
- Logic Puzzles (who lives where with which object, etc.)

II. Logical Reasoning

- Conditional Statements (Hypothesis / Conclusion)
- Write the converse of a statement
- Logical Syllogism - Know the 3 parts and be able to work with syllogisms
- Logical Chains - Is there a chain? If so, what is the hypothesis / conclusion?
- Euler Diagrams - Get a conditional statement or draw the diagram.
- Biconditionals / Definitions
- Tell of a statement is false / identify a counterexample

III. Formal Proofs -- (Looking over the "Proof Packet" is a good idea)

- Know the Properties of Equality (10) and those of Congruence (3)
- Understand acceptable reasons in proofs
- Be able to do a two-column algebra "proof"
- **Geometry Proofs**
 - *You will have to do at least three proofs from scratch! (likely more)*
 - Be able to supply missing statements and/or reasons
 - Segments, Angles, Triangles, and Quadrilaterals are fair game
 - *Hint: Analyze the situation before you begin a proof*
- Can I possibly emphasize this in a more extreme way?

IV. Results from Proofs

- Know the result of the Vertical Angles Theorem
- Be able to use the *Vertical Angles Theorem* in any angle problem (algebra)
- Be able to use or state the *Overlapping Segments Theorem* (algebra)
- Be able to use or state the *Overlapping Angles Theorem* (algebra)

V. Vocabulary (not too extensive this time)

- Vertical Angles, Proof, Converse, Hypothesis, Conclusion, Given, Prove, Conditional Statement, Deductive Reasoning, Logical Chain, Logical Syllogism, Biconditional, Counterexample

~~~~~ NOTES ~~~~~

- Test Date: Tuesday, March 2, 2010
- You can use a calculator on the exam.
- You will have the entire block, if necessary; *take responsibility for your performance!*
- This is a *major* grade ... prepare accordingly!
- **Moreover, this is the final major grade of the grade period.**
(You can boost the grade or ruin it -- be careful!)