**Test Notes**

**Geometry**

**Unit 2 – Reasoning and Proof**

Conditional Statements

* Conditional Statements are if, hypothesis, then, conclusion
* Proving a conditional false takes one counterexample
* Converse statements switch the hypothesis and the conclusion

Biconditional Statements

* Biconditional statements are conditionals and converses that are both true
* True biconditional statements use the phrase “if and only if”
* Biconditionals can be written to be good definitions

Deductive Reasoning

* Deductive reasoning is a logical process from given statements
* Law of detachment – If a conditional is true and its hypothesis is true, its conclusion is true
* Law of syllogism – Two conditionals are joined with the conclusion of one being the hypothesis for the other, creating a true statement

Reasoning in Algebra

* Algebra properties as previously given
* Algebra properties can be used to justify algebra steps, proving an answer

Proving angles congruent

* Know the definitions of – Vertical angles, Adjacent angles, Complementary angles, Supplementary angles
* Identify angles in a diagram
* Vertical angles are congruent