Chapter 2 Test Topics

2.1

- Conditional- IF/THEN statement
 - Has two parts: the hypothesis and the conclusion
 - Hypothesis follows the IF
 - Conclusion follows the THEN
 - The hypothesis and the conclusion DO NOT include IF and THEN
- Truth Value- any if then statement can have a truth value
 - The truth value can be true or false depending on if the statement is true or false
 - True- simply just state true
 - False-provide a counterexample that explains why the statement is false.
- Converse- when the hypothesis and conclusion are switched.

2.2

- Biconditional can ONLY be written if the conditional and the converse are both true.
 - In order to write the biconditional you can use either the conditional or the converse.
 - You take out the words IF and THEN and replace the THEN with If and only if or (IFF)

5.4

- Negation has the opposite truth value.
- Inverse- Negate both the hypothesis and conclusion
- Contrapostive-Switch the hypothesis and conclusion and negate both (negation of the converse)

2.4

Properties of Equality

Addition Property of Equality	If $a = b$ then $a + c = b + c$
Subtraction Property of Equality	If $a = b$ then $a - c = b - c$
Multiplication Property of Equality	If $a = b$ then $ac = bc$
Division Property of Equality	If $a = b$ then $\frac{a}{c} = \frac{b}{c}$
Reflexive Property of Equality	a = a
Symmetric Property of Equality	If $a = b$ then $b = a$
Transitive Property of Equality	If $a = b$ and $b = c$ then $a = c$
Substitution Property	If $a = b$, then b can replace a in any
	expression
Distributive Property	a(b+c) = ab + bc

Properties of Congruence

Reflexive Property of Congruence	$\overline{AB} \cong \overline{AB}$
	$\angle A \cong \angle A$
Symmetric Property of Congruence	If $\overline{AB} \cong \overline{CD}$, then $\overline{CD} \cong \overline{AB}$
	If $\angle A \cong \angle B$, then $\angle B \cong \angle A$
Transitive Property of Congruence	If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$, then $\overline{AB} \cong \overline{EF}$
	If $\angle A \cong \angle B$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$

2.5

- Vertical Angles are congruent
- Complementary Angles are two angles that add up to 90 degrees-they are called complements of each other
- Supplementary Angles are two angles that ad up to 180 degrees-they are called the supplements of each other
- All right angles are congruent
- IF two angles ae congruent and supplementary, then each is a right angle.

**2 total proofs—1 justification of an algebra problem and 1 geometry proofs

**Vocabulary from the quiz will also be on the test