


Honors Geometry
Unit 2 Assignment Sheet
Reasoning & Proof

Day	Date	Unit 2 Topics	Homework
1	Tues., 9/7	2.1 Conditionals & converses 2.2 Biconditionals & Definitions 5.4 Negation; Inverses & Contrapositives,	WS- Conditionals Exs 1-25 Also p. 269 # 42 & 43
2	Wed., 9/8	5.4 Indirect Proofs 2.3 Deductive Reasoning, Law of Detachment & Law of Syllogism 2.5 Properties of equality & congruence	p. 267 10, 12, 30 p. 84 4, 8, 12-24 E, 30 & 32 p. 91-94 2-30 evens  (OMIT 12, 18, 20, 24)
3	Thurs., 9/9	Review **Maybe proof puzzles	Finish review and STUDY!
4	Fri., 9/10	Algebra Review: Systems of Equations UNIT 2 TEST	Finish the review of systems worksheet

Notes:

A proof is like a game. My favorite example is Chutes and Ladders. You know where you start and stop, you must supply the middle steps (or paths). The more theorems, postulates and definitions you know the more shortcuts you are allowed to take.

****You must be able to justify each statement that you make with a valid reason.****

When you are comparing angles remember the **angles** themselves are always **congruent**, and their **measures** are always **equal**. The definition of congruence allows you to change back and forth between the two.

Vocabulary:

conditional

hypothesis

conclusion

truth value

converse

biconditional

deductive reasoning

vertical angles

adjacent angles

complementary angles

supplementary angles

theorem

paragraph proof

Properties of Equality & Congruence:

Reflexive

Symmetric

Transitive

Distributive Property

Properties of Equality

Addition POE

Subtraction POE

Multiplication POE

Division POE

Substitution POE

Law of Detachment:

If a conditional is true and its hypothesis is true, then the conclusion is true.

In symbolic form: If $p \rightarrow q$ is a true statement and p is true, then q is true.

Law of Syllogism:

If $p \rightarrow q$ and $q \rightarrow r$ are true statements, then $p \rightarrow r$ is a true statement.

Properties of Congruence

Reflexive Property

$\overline{AB} \cong \overline{AB}$ and $\angle A \cong \angle A$

Symmetric Property

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

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

$\angle A \cong \angle C$

Vertical Angles Theorem

Vertical angles are congruent

Congruent Supplements Theorem

If two angles are supplements of the same angle (or of congruent angles), then they are congruent.

Congruent Complements Theorem

If two angles are complements of the same angle (or of congruent angles), then they are congruent.

Theorem:

All right angles are congruent.

Theorem:

If two angles are congruent and supplementary, then each is a right angle.