Geometry

Chapter 2.2 – Logic

Name: _____

I can…

- Identify and write conjunctions & disjunctions (and negations) using proper notation.
- Determine proper truth values in given statements
- Identify the parts of conditional statements and write or convert statements into conditional form.
- Explain and write the various forms of conditional statements (converse, inverse, contrapositive)

Items in bold should be turned in to me or put in the binder.

_____video notes

_____book assignment

_____Mad as a Hatter worksheet

_____resource video

_____resource worksheets

_____pre-mc

_____mastery check

Pre-mc

Use the statements below to write a compound statement. Then find its truth value.

p: -3 – 2 = -5
q: Vertical angles are congruent
r: 2 + 8 > 10

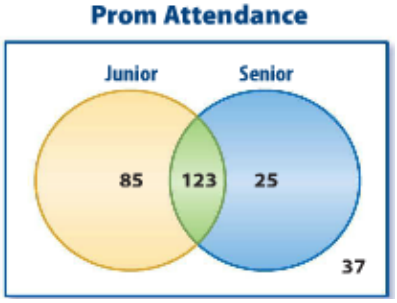
1. $p \wedge r$

2. $r \vee q$

3. $\sim p \wedge r$

4. A prime number is a number other than 1, that is divisible by only itself and 1. Lucille read that prime numbers are very important in cryptography, so she decided to find a systematic way of producing prime numbers. After some experimenting, she conjectured that 2^n-1 is a prime for all whole numbers $n > 1$. Find a counterexample to this conjecture.

5. The Venn diagram shows the number of graduates last year who did or did not attend their junior or senior prom.



   a. How many graduates attended their senior but not their junior prom?

   b. How many graduates attended their junior and senior proms?

   c. How many graduates did not attend either of their proms?

   d. How many students graduated last year? Explain your reasoning?

6. Write the converse, inverse, and contrapositive of the given statements and determine the truth values of each.

   If $x=3$, then $x^2=9$