

COSC 440  
Homework #0  
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7/6/12

**Problem 0.1, a-c**

- (a) All odd positive integers.
- (b) All even integers, including zero.
- (c) All even positive integers.

**Definition 1.** *This is a definition. You may need this for your proofs.*

**Theorem 1.** *This is a theorem. This should just be a statement of the theorem.*

*Proof.* This is the proof of the above theorem. The little box is Q.E.D. □

**Examples of Symbols**

Existential and "in":  $\exists i \in S$

Universal:  $\forall j \in S$

Subset, subset, proper subset:  $S \subset V \subseteq T \subsetneq U$

Union and Intersection:  $R \cup S \cap T$

Or, And, XOR:  $i \vee j \wedge k \oplus l$

Implication, equivalence, not implies:  $i \rightarrow j \leftrightarrow k \nrightarrow l$

Less than or equal, greater than or equal:  $i \leq j \geq k$

Equivalent, congruent:  $i \equiv j \cong k$

Therefore, various Greek letters:  $\therefore \Sigma \Gamma \delta$