Willis Allstead

5/7/18

CS 491

Lab 3

**Similarity**

3.7.10: (a)

v4 neighbors = {v3, v5, v6}

v5 neighbors = {v3, v4, v6}

Jaccard Similarity = |{v3, v5, v6}⋂{v3, v4, v6}| / |{v3, v5, v6}∪{v3, v4, v6}|

= 1/2

Cosine Similarity = |{v3, v5, v6}⋂{v3, v4, v6}| / √(|{v3, v5, v6}|\*|{v3, v4, v6}|)

= 1/3

4.7.4:

4.7.7:

Random graphs are incapable of modeling real-world graphs because of the basic assumption required in creating them, which is that edges between nodes are formed randomly. In the real-world these relationships between nodes are complex, and are not perfectly random. This makes modeling real-world graphs with random graphs imperfect.