**Csc360: Homework-3 Grammars and Languages**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Download this Word file and insert your answer in the same word document, then upload the Word file to** [**Canvas**](https://uncw.instructure.com/login/ldap)

1. **Construct a grammar over** $\{a,b\}$ **whose language is** $:$

$$\{a^{m}.b^{n} | 0 \leq n \leq m\leq 3n\}$$

1. **For the following context-free grammar, use the set notation to define the language generated by:**

$$S \rightarrow aSbb | A$$

$$A \rightarrow cA | c$$

1. **For the following context-free grammar, use the set notation to define the language generated by:**

$$S \rightarrow aSb | A$$

$$A \rightarrow cAd | cBd$$

$$B \rightarrow aBb |ab$$