Give context-free grammars for each of the following languages. For each grammar, describe *in English* the language for each non-terminal, and in the examples above. As usual, we won't get to all of these in section. Skip those that were done in class.

1. Binary palindromes: Strings over $\{0,1\}$ that are equal to their reversals. For example: **00111100** and **0100010**, but not **01100**.

2. $\{0^{2n}1^n \mid n \geq 0\}$

3. $\{0^m1^n \mid m \neq 2n\}$

4. $\{0,1\}^* \setminus \{0^{2n}1^n \mid n \geq 0\}$

5. Strings of properly nested parentheses **()**, brackets **[]**, and braces **{}**. For example, the string **([]){}** is in this language, but the string **([)]** is not, because the left and right delimiters don't match.

6. Strings over $\{0,1\}$ where the number of **0**s is equal to the number of **1**s.

7. Strings over $\{0,1\}$ where the number of **0**s is *not* equal to the number of **1**s.