8. Remove all unit-productions, all useless productions, and all λ-productions from the grammar

$$S \rightarrow aA|aBB,$$
$$A \rightarrow aaA|\lambda,$$
$$B \rightarrow bB|bbC,$$
$$C \rightarrow B.$$

What language does this grammar generate?

13. Consider the grammar G with productions

$$S \rightarrow A|B,$$
$$A \rightarrow \lambda,$$
$$B \rightarrow aBb,$$
$$B \rightarrow b.$$

Construct a grammar $\widehat{G}$ by applying the algorithm in Theorem 6.3 to G. What is the difference between $L(G)$ and $L(\widehat{G})$?