HW5 **(***due 6 May Thursday before the recitation)*

Def*. An unrestricted grammar* $G = (V,T,R,S)$ *is said to be a* ***context-free grammar*** *(CFG) if every production* $u \rightarrow v$ *in* R *is of the form* $A \rightarrow v$ *where* A *is an element of* V*.*

Q1 *- Using PCP show that for two CFG's* G_1 *and* G_2 *the problem whether* $L(G_1)$ *and* $L(G_2)$ *are disjoint sets is* ***undecidable****.*

Q2 *- For an unrestricted grammar* G *show that whether some* $w \in L(G)$ *is an* ***undecidable*** *problem.*

Main text 4.6.3, 5.7.4 (Explain/interpret difference of these two problems/solutions) 5.7.5