Homework 11
for MATH 421

From our text, please do problems 8.1 and 8.2. Then do the following problems.

(A) Show that the free group on 3 generators is a subgroup of the free group on 2 generators.

(B) Express the following groups $\mathbb{Z}_{30}$, $\mathbb{Z}^2 \times \mathbb{Z}_2$ and the quaterions as free groups modulo the appropriate relations.

(C) Find a radical extension of $\mathbb{Q}$ of the element $(2-\sqrt{3})^{\frac{1}{5}} - 3\sqrt[7]{4}(4+\sqrt[13]{5})^{\frac{2}{9}}$.