Institutionen för matematik **KTH**
Svante Linusson
790 94 44

Hand-in-problems for Convex Polytopes VT13
Third set of problems

Cooperation regarding the hand-in-problems is not permitted.
You must have written your solution on your own. Any external source used must be cited.

List of Hand-in problems

10) Exercise 5.7 in "Lectures on Polytopes".

11) Prove that an order $F_1, \ldots, F_{2d}$ of the facets of the d-cube is a shelling order if it satisfies $F_1 = -F_{2d}$.
Bonus-question: Prove that the d-cube is extendably shellable (hejdlöst skalbar) for every $d \geq 2$. (Hint: prove first that $F_1, \ldots, F_{2d}$ is a shelling order if $\forall j, \exists i < j$ s.t. $F_k = -F_i$, where $k > j$.)

   Problems 10-11 are **due 19/4**

Good Luck!!

Svante