

Spring 2016, Math 485
Week 13 Homework

- (Q1) Draw the Cyclic polytope for $d = 3$ and $n = 5$ (or any other d, n you choose, bounded below by this case). You may use software to aid in this task.
- (Q2) Compute the face poset of the cyclic polytope for $d = 3$ and $n = 5$ (or any other d, n you choose, bounded below by $d = 3$ and $n = 5$).
- (Q3) Prove that the Catalan matroid (described in the Chavez-Yazmon paper) satisfies the basis matroid axioms.
- (Q4) Verify the bijection given in the Chavez-Yamzon paper for $d = 3$ (or any other $d \geq 3$).