

**Spring 2022, Math 579: Preliminary Problem Set 4**  
**Due: Thursday, February 17th, 2022**  
**Binomial Theorem (Deep Cuts) and Catalan Numbers**

**Preliminary problems.** These problems should be completed before discussion on Thursday.

(P1) A *lattice path* is a path consisting only of unit moves up and right. Draw all 6 lattice paths from  $(0,0)$  to  $(2,2)$ ; one is already drawn for you.

