

Fall 2019, Math 579: Preliminary Problem Set 11
Due: Thursday, November 21st, 2019
Combinatorics of Ordinary Generating Functions

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

- (P1) When defining $A(B(z))$, why do we require $B(z)$ to have constant term 0? Hint: attempt to write out (using “ \dots ” notation) the coefficients of $A(2 + z)$, where

$$A(z) = \frac{1}{1 - z}.$$

- (P2) Look back to your class notes from Week 4, and locate the formula for the total number of (strong) compositions of the positive integer n . Verify this formula for $n = 4$ by listing all strong compositions of 4.