

**Fall 2022, Math 621: Preliminary Problem Set 7**  
**Due: Thursday, March 10th, 2022**  
**Ehrhart Polynomials and Ehrhart Series**

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

(P1) Find a rational form for the Ehrhart series  $\text{Ehr}(P; z)$  of each of the following polytopes  $P$ .

(a)  $P = \text{conv}\{(0, 0), (2, 0), (1, 1)\}$ .

(b)  $P = \{(a, b) \in \mathbb{R}^2 : a, b \geq 0, a + b \leq 2\}$ .