

Young Tableaux and Symmetric Functions

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ABSTRACT. These are lecture notes for Math 206a (Algebraic combinatorics), UCLA Fall 2025.

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An integer partition of $n \in \mathbb{N}$ is a sequence of integers $\lambda = (\lambda_1, \lambda_2, \dots, \lambda_k)$ such that $\sum_i \lambda_i = n$ and $\lambda_1 \geq \lambda_2 \geq \dots \geq \lambda_k$. We denote $\lambda \vdash n$, and $\ell(\lambda) = k$.

We will represent an integer partition using a *Young diagram*, which is a stack of boxes so that the i -th row has λ_i boxes.

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