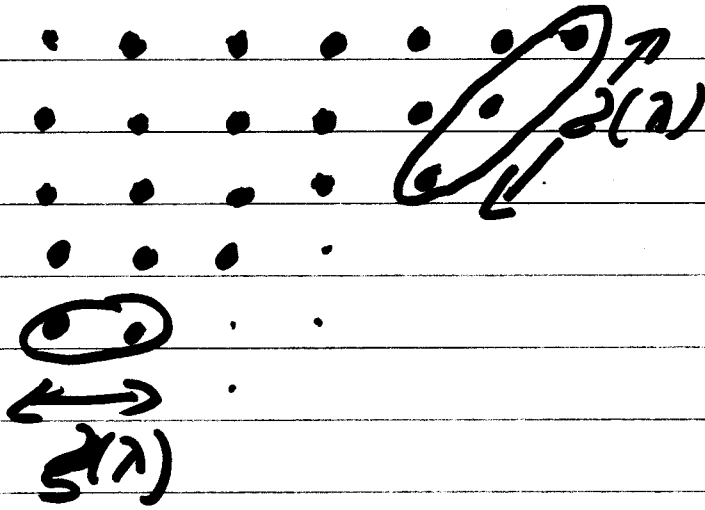


Proof of Theorem

We define a map on the set of partitions of n into distinct parts. For a partition $\lambda = (\lambda_1, \lambda_2, \dots, \lambda_r)$ we set

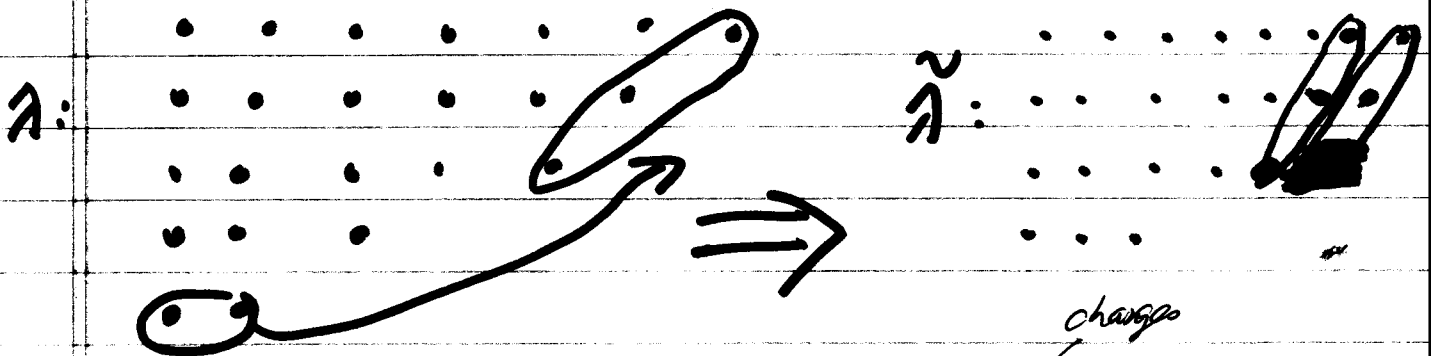
$$s(\lambda) = \text{the smallest part } \lambda_r,$$

and
$$a(\lambda) = \# \text{ of consecutive parts starting with the largest part.}$$



Case 1: $s(\lambda) \leq a(\lambda)$

Note: $s(\tilde{\lambda}) > a(\tilde{\lambda})$



This changes the # of parts by 1, and hence the parity of the # of parts.