MIRI, MAMME, MPAL – Computational Complexity – Homework 2

Exercise 1: Argue that if $\Delta_k^P = \Sigma_k^P$, then Δ_k^P =PH.

Solution: I will prove that if $\Delta_k^P = \Sigma_k^P$, then $\Delta_k^P = \Pi_k^P$. This implies that $\Sigma_k^P = \Pi_k^P$, and we have seen in class that this implies $\Sigma_k^P = \Pi_k^P = PH$.