

$$S \subset T \Rightarrow \underset{S}{\bar{c}}^{-1T} \underset{\text{Moeb}}{=} (-1)^{\overline{T \setminus S}}$$

$$(-1)^{\overline{S \setminus S}} = (-1)^0 = 1$$

$$\begin{aligned} R \subsetneq T &\Rightarrow \sum_{R \subset S \subset T} (-1)^{\overline{T \setminus S}} \underset{A = \overline{T \setminus S}}{=} \sum_{A \subset T \setminus R} (-1)^{\bar{A}} = \sum_{0 \leq i \leq |T \setminus R|} (-1)^i \sum_{\substack{|A|=i \\ A \subset T \setminus R}} 1 \\ &= \sum_{0 \leq i \leq |T \setminus R|} (-1)^i \underset{\text{binomi}}{=} \binom{\overline{T \setminus R}}{i} \overbrace{1 - 1}^{\overline{T \setminus R} > 0} = 0 \end{aligned}$$

$$\underset{\emptyset}{\bar{c}}^{-1T} \underset{\text{Moeb}}{\text{red}} (-1)^{\bar{T}}$$