

1 Brutal combinatorics

We are considering subsets of $\Delta^n \star (\Delta^n)^{\text{op}}$, where the following simplices are scaled:

- Every 2-simplex factoring through Δ^n
- Every 2-simplex factoring through $(\Delta^n)^{\text{op}}$
- The simplices $ij\bar{k}$ for $i < j \leq k$
- The simplices $k\bar{j}\bar{i}$ for $i < j \leq k$.

Any simplicial subset of this is completely determined by the vertices it contains. We consider any such subset to inherit the scaling and marking.

We further consider each 1-simplex in $(\Delta^n)^{\text{op}}$ to be marked.

Lemma 1.0.1. For $n = 2$, the inclusion $01\bar{0} \cup \bar{1}\bar{0} \hookrightarrow 01\bar{1}\bar{0}$ is mk-anodyne.