Example of a Glued Surface

\[ X = \quad = \quad = \quad uuvV \]

\[ u = \quad \]

\[ v = \]

\[ uvuV = \]
Gluing a Surface is like Cancellation

\[ X \times \mathbb{R} \rightarrow X \times \mathbb{R} \]
Visualization of the Category $\Delta$

$\Delta$ is the category of all standard simplices and simplicial maps between them.