Definition

Let $\langle \mathbf{C}, \otimes, \mathrm{un} \rangle$ be a strict monoidal category. Its associated operad $\mathcal{O}_{\mathbf{C}}$ has:

1. *Objects*: $\mathrm{Ob}_{\mathcal{O}_{\mathbf{C}}} = \mathrm{Ob}_{\mathbf{C}}$;
2. *Morphisms*: $\mathrm{Hom}_{\mathcal{O}_{\mathbf{C}}}([X_1, \ldots, X_n]; Y) = \mathrm{Hom}_{\mathbf{C}}(X_1 \otimes \ldots \otimes X_n; Y)$;
3. *Identity morphism*: $\mathrm{Id}_X \in \mathrm{Hom}_{\mathcal{O}_{\mathbf{C}}}([X]; X) = \mathrm{Id}_X \in \mathrm{Hom}_{\mathbf{C}}(X; X)$;
4. *Composition of morphisms*: