

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

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