

**Definition** (Symmetric monoidal category). A *symmetric monoidal category* is a braided monoidal category  $\langle \mathbf{C}, \otimes, \mathbf{1}, \text{br} \rangle$  for which the braiding satisfies the symmetry condition

$$\text{br}_{X,Y} \circ \text{br}_{Y,X} = \text{Id}_{X \otimes Y}$$

for all  $X, Y \in \text{Ob}_{\mathbf{C}}$ .