Definition (Compact closed category). Let $\langle \mathbf{C}, \otimes, I, \sigma \rangle$ be a symmetric monoidal category. It is called *compact closed* if, for all $C \in \mathbf{C}$ there exists some object $C^* \in \mathbf{C}$ (called the *dual of C*), a morphism $\eta_C : I \to C^* \otimes C$ (called the *unit for C*), and a morphism $\epsilon_C : C \otimes C^* \to I$ (called the *counit of C*) such that the following diagrams commute for all $C \in \mathbf{C}$: