between A and B is known as the external hom, and is canonically defined for every category **C**. For certain categories, however, there is also an *internal hom* $[A,B] \in \mathbf{C}$ which satisfies $\operatorname{Hom}_{\mathbf{C}}(A,B) \simeq \{f : \mathbf{1} \to [A,B]\},\$ where **1** is the monoidal unit in **C**; we say that $Hom_{\mathbf{C}}(A, B)$ is the set of generalized

elements of [A, B].

Definition (External and internal hom). The set $Hom_{\mathbb{C}}(A, B)$ of morphisms