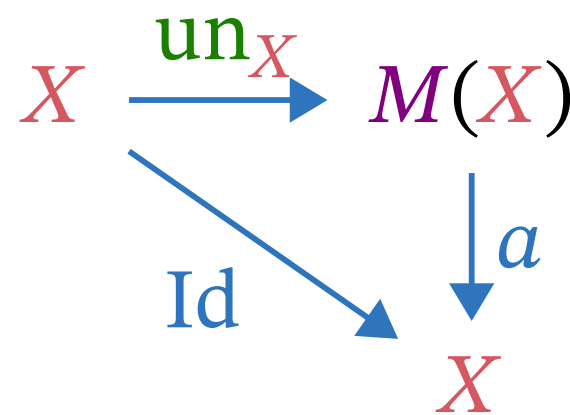


**Definition** (Algebra of a monad). Let  $\langle M, \text{un}, \text{mu} \rangle$  be a monad on a category  $\mathbf{C}$ . An algebra of  $M$  (also called an  $M$ -algebra) is specified by: Constituents

1. an object  $X$  of  $\mathbf{C}$ ;
2. a morphism  $a : M(X) \rightarrow X$  of  $\mathbf{C}$ .

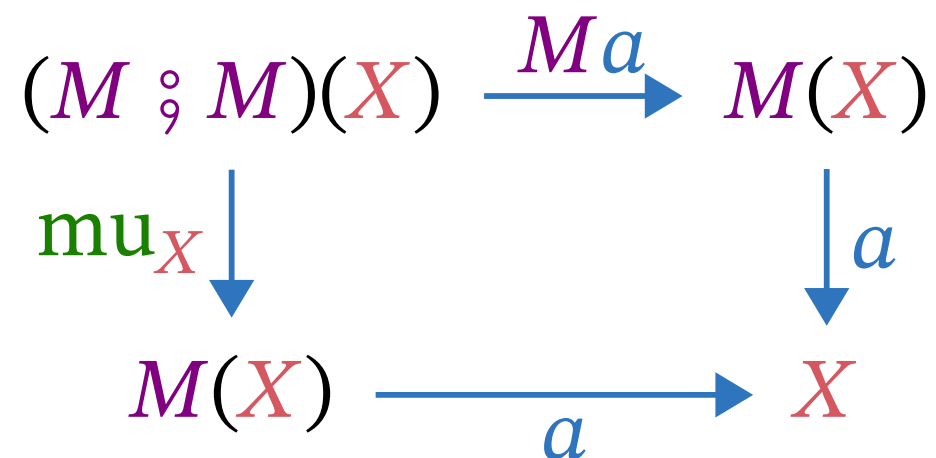
### Conditions

1. *Unit*: the diagram



commutes.

2. *Composition*: the diagram



commutes