Properties of the Dot Product

Let $\vec{u}$, $\vec{v}$, and $\vec{w}$ be vectors, and let c be a scalar.

i.	$\vec{u} \cdot \vec{v} = \vec{v} \cdot \vec{u}$	Commutative Property
ii.	$\vec{u} \cdot (\vec{v} + \vec{w}) = \vec{u} \cdot \vec{v} + \vec{u} \cdot \vec{w}$	Distributive Property
iii.	$c(\vec{u} \cdot \vec{v}) = (c\vec{u}) \cdot \vec{v} = \vec{u} \cdot (c\vec{v})$	Associative Property
iv.	$\vec{v} \cdot \vec{v} = \|\|\vec{v}\|\|^2$	Property of Magnitude