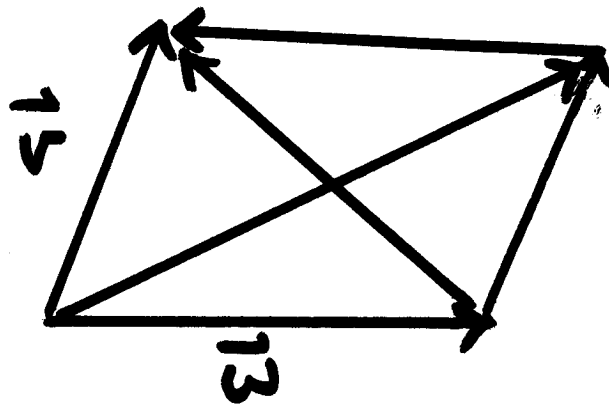


6 commutative and associative laws will apply.

7 $\vec{v} + \vec{0} = \vec{0} + \vec{v} = \vec{v}$

8 $\vec{v} + (-\vec{v}) = \vec{0}$

9



Multiplying vectors by numbers

If $\alpha = \text{real } \neq \Rightarrow \alpha \vec{v}$ is a vector whose magnitude $\|\alpha \vec{v}\| = |\alpha| \|\vec{v}\|$

a direction same as \vec{v} if $\alpha > 0$

b " opposite to \vec{v} if $\alpha < 0$

c $\alpha \vec{v}$ scalar multiple of \vec{v}

