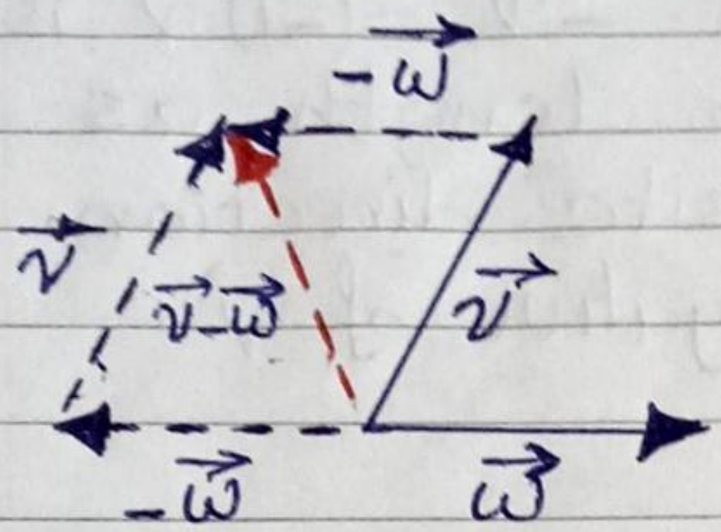
as follows

$$\vec{v} - \vec{w} = \vec{v} + (-\vec{w})$$

If $\vec{v}$ and $\vec{w}$ are positioned vectors so their initial points coincide, then $\vec{v} - \vec{w}$ can be formed as follows:



In special case where $\vec{v} = \vec{w}$ then the terminal points of the vectors coincide as well as the initial points, so their difference is $\vec{0}$ i.e.

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

Each vector $\vec{v}$ is represented by pair (x, y) if it is in $\mathbb{R}^2$ or triple (x, y, z) if it is in $\mathbb{R}^3$.

We call x, y and z, the components or coordinates of $\vec{v}$.

$\mathbb{R}^2$ $\qquad$ $\mathbb{R}^3$

Components

$\vec{v} = (x, y)$ $\qquad$ $\vec{v} = (x, y, z)$