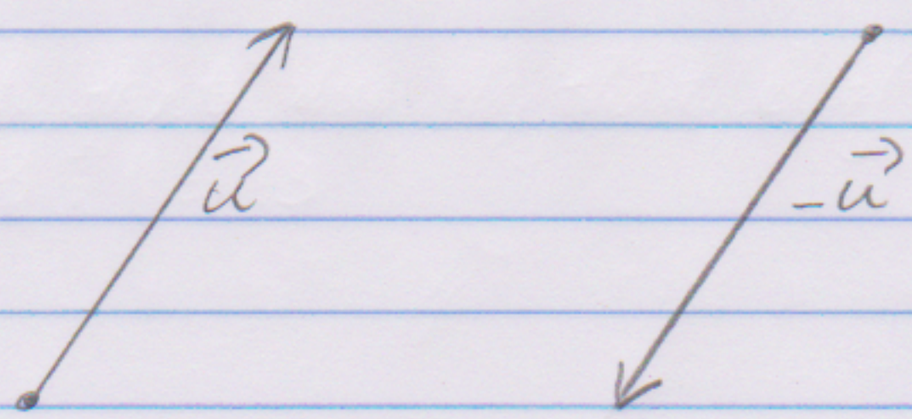
is the terminal point of $\vec{v}$

Negatives

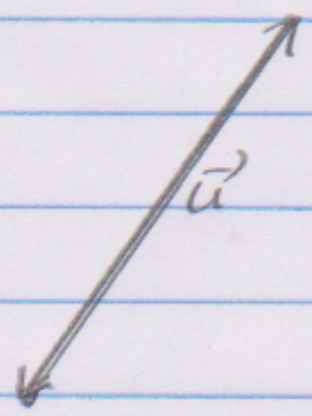
The negative of a vector $\vec{u}$ is represented by $-\vec{u}$ and it is the vector with the same magnitude as $\vec{u}$ but has opposite direction of $\vec{u}$.



The Vector $\vec{0}$ is a vector of length or magnitude equal to 0.

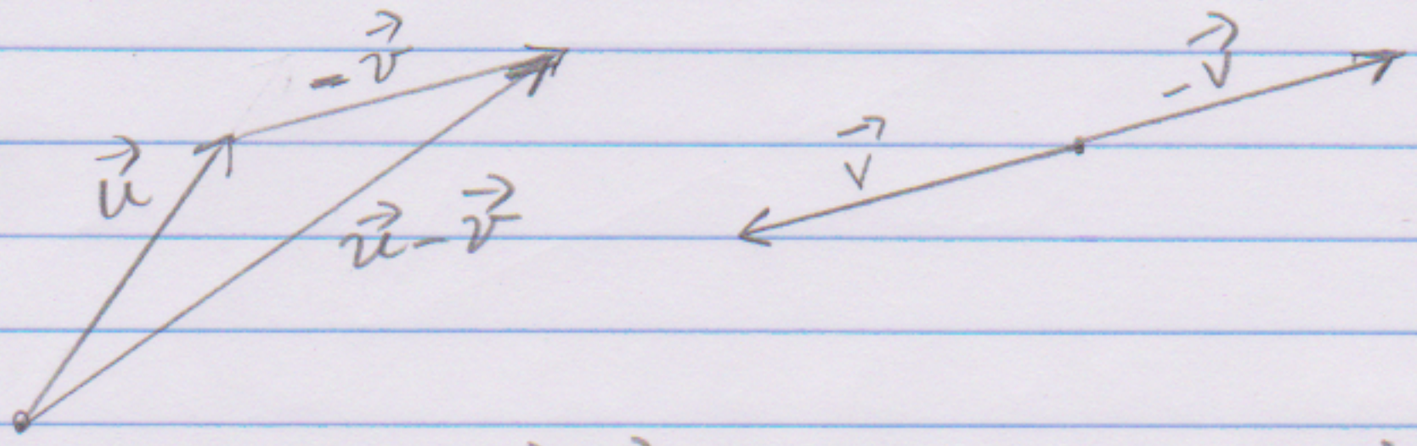
$\vec{u} + (-\vec{u}) = \vec{0}$

If geometrically perform the addition of $\vec{u} + (-\vec{u})$, you can see that the initial point of $\vec{u}$ did not move and therefore the sum is equal to zero.



Vector Subtraction Let $\vec{u}$ and $\vec{v}$ be two vectors in R^2

Then $\vec{u} - \vec{v} = \vec{u} + (-\vec{v})$



So the difference $\vec{u} - \vec{v}$ is the vector whose initial point is