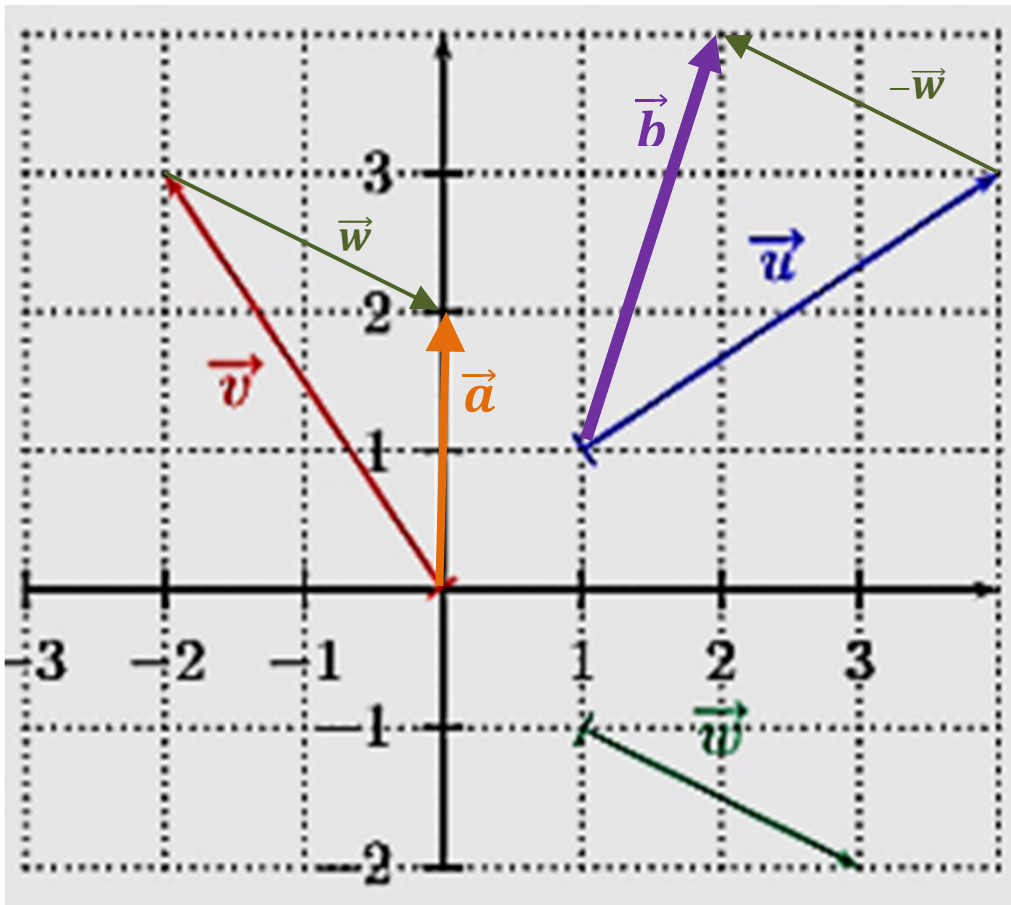# Manipulation de vecteurs
CORRECTION

Q1. $\vec{u} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$, $\vec{v} = \begin{pmatrix} -2 \\ 3 \end{pmatrix}$ et $\vec{w} = \begin{pmatrix} 2 \\ -1 \end{pmatrix}$.

Q2. $\|\vec{u}\| = \sqrt{3^2 + 2^2} = \sqrt{13}$,

$\|\vec{v}\| = \sqrt{(-2)^2 + 3^2} = \sqrt{13}$,

$\|\vec{w}\| = \sqrt{2^2 + 1^2} = \sqrt{5}$

Q3. $\vec{a} = \vec{v} + \vec{w} = \begin{pmatrix} -2 \\ 3 \end{pmatrix} + \begin{pmatrix} 2 \\ -1 \end{pmatrix} = \begin{pmatrix} 0 \\ 2 \end{pmatrix}$ et $\|\vec{a}\| = \sqrt{0^2 + 2^2} = 2$

Q4. $\vec{b} = \vec{u} - \vec{w} = \begin{pmatrix} 3 \\ 2 \end{pmatrix} - \begin{pmatrix} 2 \\ -1 \end{pmatrix} = \begin{pmatrix} 1 \\ 3 \end{pmatrix}$ et $\|\vec{b}\| = \sqrt{1^2 + 3^2} = \sqrt{10}$

Q5. $\vec{c} = 2.\vec{v} + 3.\vec{w} = 2.\begin{pmatrix} -2 \\ 3 \end{pmatrix} + 3.\begin{pmatrix} 2 \\ -1 \end{pmatrix} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$ **et** $\|\vec{c}\| = \sqrt{2^2 + 3^2} = \sqrt{13}$