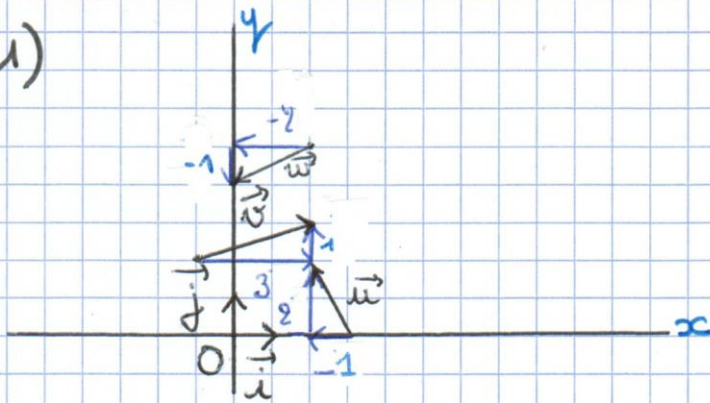


1)

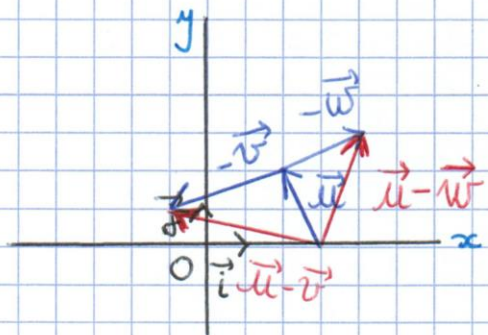
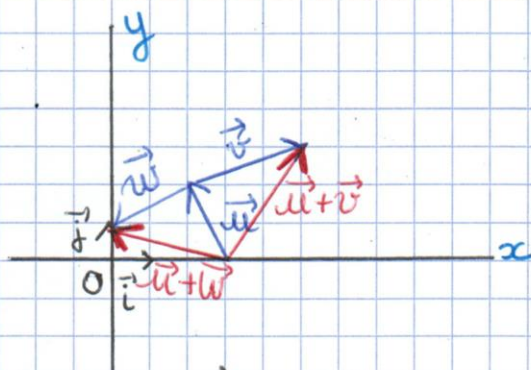


$$\vec{u} \begin{pmatrix} -1 \\ 2 \end{pmatrix}$$

$$\vec{v} \begin{pmatrix} 3 \\ 1 \end{pmatrix}$$

$$\vec{w} \begin{pmatrix} -2 \\ -1 \end{pmatrix}$$

2) a)



b) $\vec{u} + \vec{v} \begin{pmatrix} 2 \\ 3 \end{pmatrix}$

$$\vec{u} + \vec{w} \begin{pmatrix} -3 \\ 1 \end{pmatrix}$$

$$\vec{u} - \vec{v} \begin{pmatrix} -4 \\ 1 \end{pmatrix}$$

$$\vec{u} - \vec{w} \begin{pmatrix} 1 \\ 3 \end{pmatrix}$$

c) $\vec{u} + \vec{v} \begin{pmatrix} x\vec{u} + x\vec{v} \\ y\vec{u} + y\vec{v} \end{pmatrix}$

$$\vec{u} + \vec{v} \begin{pmatrix} -1 + 3 \\ 2 + 1 \end{pmatrix}$$

$$\vec{u} + \vec{v} \begin{pmatrix} 2 \\ 3 \end{pmatrix}$$

$$\vec{u} + \vec{w} \begin{pmatrix} x\vec{u} + x\vec{w} \\ y\vec{u} + y\vec{w} \end{pmatrix}$$

$$\vec{u} + \vec{w} \begin{pmatrix} -1 - 2 \\ 2 - 1 \end{pmatrix}$$

$$\vec{u} + \vec{w} \begin{pmatrix} -3 \\ 1 \end{pmatrix}$$

$$\vec{u} - \vec{v} \begin{pmatrix} x\vec{u} - x\vec{v} \\ y\vec{u} - y\vec{v} \end{pmatrix}$$

$$\vec{u} - \vec{v} \begin{pmatrix} -1 - 3 \\ 2 - 1 \end{pmatrix}$$

$$\vec{u} - \vec{v} \begin{pmatrix} -4 \\ 1 \end{pmatrix}$$

$$\vec{u} - \vec{w} \begin{pmatrix} x\vec{u} - x\vec{w} \\ y\vec{u} - y\vec{w} \end{pmatrix}$$

$$\vec{u} - \vec{w} \begin{pmatrix} -1 + 2 \\ 2 + 1 \end{pmatrix}$$

$$\vec{u} - \vec{w} \begin{pmatrix} 1 \\ 3 \end{pmatrix}$$

La lecture et le calcul des coordonnées de $\vec{u} + \vec{v}$, $\vec{u} + \vec{w}$, $\vec{u} - \vec{v}$ et $\vec{u} - \vec{w}$ sont cohérents.