

Correction des exercices donnés la semaine du 06 avril :

9. 1.  $\frac{1}{3}\vec{u} = \vec{x}$ ,  $-\vec{u} = \vec{z}$ ,  $3\vec{u} = \vec{w}$ ,  $-\frac{2}{3}\vec{u} = \vec{v}$  et  $-\frac{4}{3}\vec{u} = \vec{y}$ .

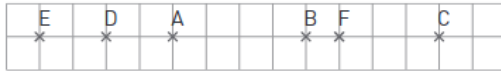
2. a) Même sens que  $\vec{u}$  :  $\vec{x}$  et  $\vec{w}$ .

b) Norme supérieure à celle de  $\vec{u}$  :  $\vec{w}$  et  $\vec{y}$ .

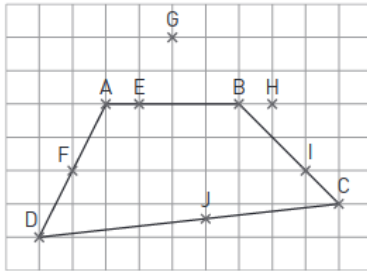
c) Même direction que celle de  $\vec{u}$  :

tous les vecteurs.

10.



11. 1.



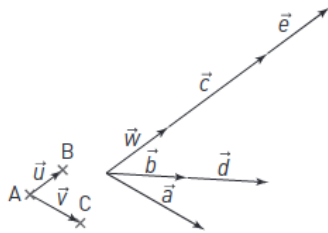
2. a)  $\vec{AE} = \frac{1}{4}\vec{AB}$

b)  $\vec{DF} = \frac{1}{2}\vec{DA}$

c)  $\vec{BG} = -\frac{2}{3}\vec{BC}$

12. Sur la figure  $2\vec{u} = \vec{w}$ ,  $2\vec{v} = \vec{a}$ ,  $\vec{u} + \vec{v} = \vec{b}$  et  $5\vec{u} = \vec{c}$ .

$$2\vec{u} + 2\vec{v} = 2(\vec{u} + \vec{v}) = \vec{d} \quad 2\vec{u} + 5\vec{u} = 7\vec{u} = \vec{e}$$



13. 1.  $\vec{NM} \begin{pmatrix} -8 \\ -2 \end{pmatrix}$ ,  $\vec{PM} \begin{pmatrix} -11 \\ 9 \end{pmatrix}$  et  $\vec{PN} \begin{pmatrix} -3 \\ 11 \end{pmatrix}$

2.  $\vec{MN} \begin{pmatrix} 8 \\ 2 \end{pmatrix}$ ,  $\vec{MP} \begin{pmatrix} 11 \\ -9 \end{pmatrix}$  et  $\vec{NP} \begin{pmatrix} 3 \\ -11 \end{pmatrix}$

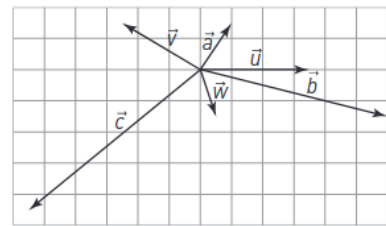
3.  $\vec{PN} + \vec{NM} - \vec{PM} \begin{pmatrix} 0 \\ 0 \end{pmatrix}$

14. 1.  $\vec{a} = \vec{u} + \vec{v} \begin{pmatrix} 2 \\ 3 \end{pmatrix}$

$\vec{b} = \vec{u} - \vec{v} \begin{pmatrix} 12 \\ -3 \end{pmatrix}$

2.  $\vec{c} = 3\vec{w} - 2\vec{u} \begin{pmatrix} -11 \\ -9 \end{pmatrix}$

3.



15. 2. a)  $\begin{pmatrix} -4 \\ 4 \end{pmatrix}$  b)  $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$  c)  $\begin{pmatrix} -8 \\ 8 \end{pmatrix}$

d)  $\begin{pmatrix} 1,5 \\ 0,5 \end{pmatrix}$  e)  $\begin{pmatrix} 7 \\ -3 \end{pmatrix}$  f)  $\begin{pmatrix} 0,6 \\ -3 \end{pmatrix}$