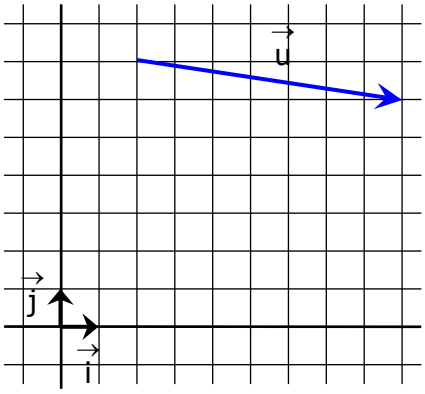
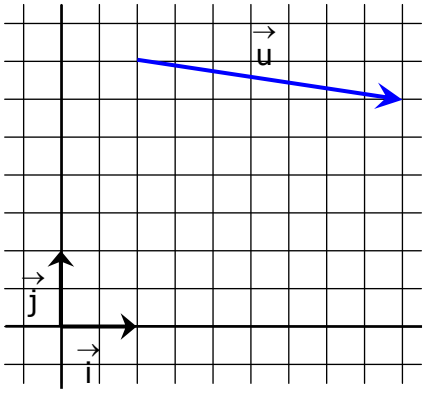
EXERCICE 6.1

a. Trouver x et y tels que $\vec{u} = x\vec{i} + y\vec{j}$

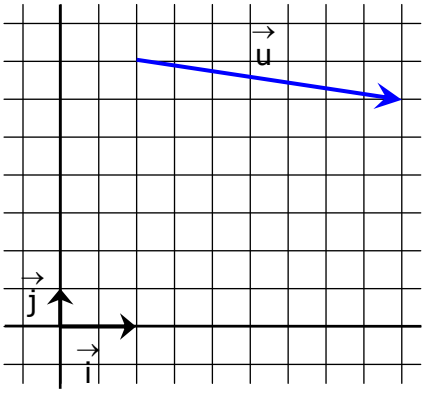
b. Tracer un vecteur $\vec{v} = 3\vec{i} - 2\vec{j}$



$\vec{u}$ = ...



$\vec{u}$ = ...

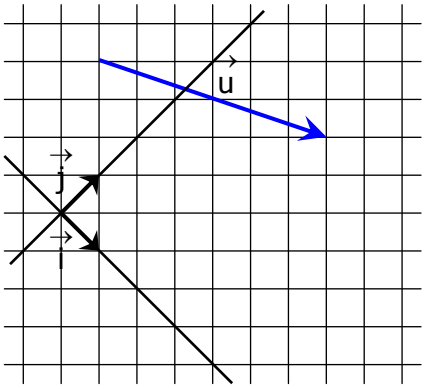


$\vec{u}$ = ...

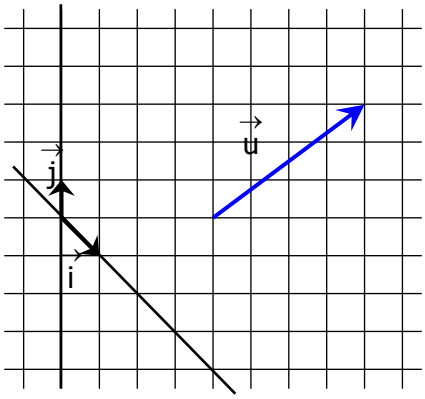
EXERCICE 6.2

a. Trouver x et y tels que $\vec{u} = x\vec{i} + y\vec{j}$

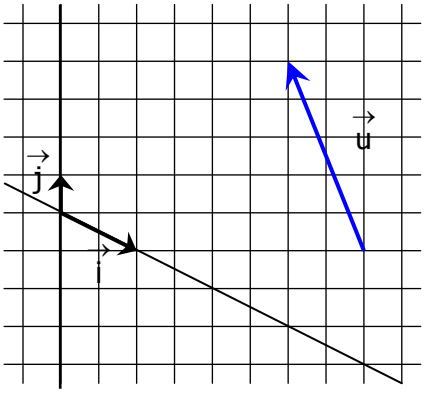
b. Tracer un vecteur $\vec{v} = -2\vec{i} + \vec{j}$



$\vec{u}$ = ...



$\vec{u}$ = ...



$\vec{u}$ = ...

EXERCICE 6.3

On considère les vecteurs suivants :

$\vec{u} = 2\vec{i} + \vec{j}$ $\quad \vec{v} = 3\vec{j}$ $\quad \vec{w} = -2\vec{i} + \vec{j}$ $\quad \vec{x} = 3\vec{i} + 2\vec{j}$ $\quad \vec{y} = -3\vec{i}$ $\quad \vec{z} = \vec{i} - 3\vec{j}$

Exprimer en fonction de $\vec{i}$ et $\vec{j}$ les vecteurs suivants :

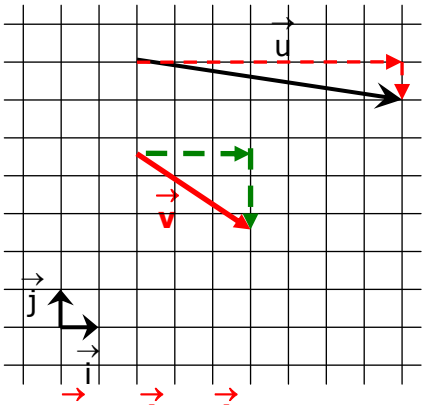
$\vec{u} + \vec{v} =$
$\vec{w} - \vec{x} =$
$-3\vec{z} =$
$\vec{u} + 2\vec{v} + 3\vec{w} =$
$2\vec{w} - \vec{x} + 3\vec{z} - \vec{y} =$

CORRIGE – NOTRE DAME DE LA MERCI - MONTPELLIER

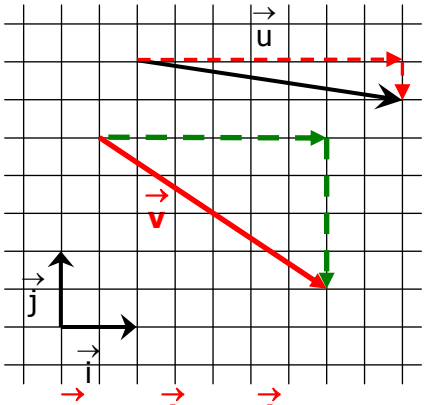
EXERCICE 6.1

a. Trouver x et y tels que $\vec{u} = x\vec{i} + y\vec{j}$

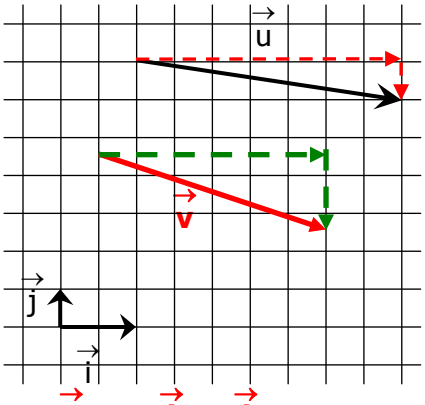
b. Tracer un vecteur $\vec{v} = 3\vec{i} - 2\vec{j}$



$\vec{u} = 7\vec{i} - 1\vec{j}$



$\vec{u} = 3{,}5\vec{i} - 0{,}5\vec{j}$

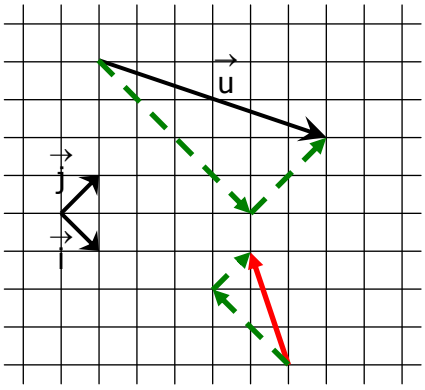


$\vec{u} = 3{,}5\vec{i} - 1\vec{j}$

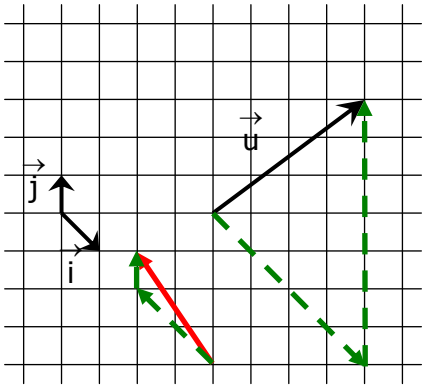
EXERCICE 6.2

a. Trouver x et y tels que $\vec{u} = x\vec{i} + y\vec{j}$

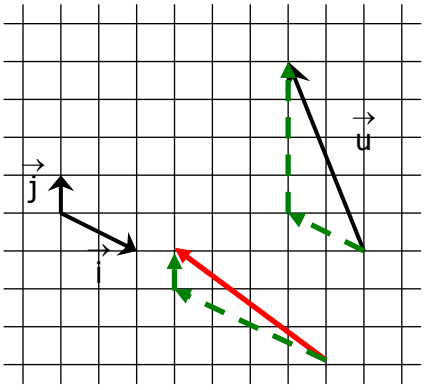
b. Tracer un vecteur $\vec{v} = -2\vec{i} + \vec{j}$



$\vec{u} = 4\vec{i} + 2\vec{j}$



$\vec{u} = 4\vec{i} + 7\vec{j}$



$\vec{u} = -1\vec{i} + 4\vec{j}$

EXERCICE 6.3

On considère les vecteurs suivants :

$\vec{u} = 2\vec{i} + \vec{j}$ $\quad \vec{v} = 3\vec{j}$ $\quad \vec{w} = -2\vec{i} + \vec{j}$ $\quad \vec{x} = 3\vec{i} + 2\vec{j}$ $\quad \vec{y} = -3\vec{i}$ $\quad \vec{z} = \vec{i} - 3\vec{j}$

Exprimer en fonction de $\vec{i}$ et $\vec{j}$ les vecteurs suivants :

$\vec{u} + \vec{v} = 2\vec{i} + \vec{j} + 3\vec{j} = 2\vec{i} + 4\vec{j}$
$\vec{w} - \vec{x} = -2\vec{i} + \vec{j} - (3\vec{i} + 2\vec{j}) = -2\vec{i} + \vec{j} - 3\vec{i} - 2\vec{j} = -5\vec{i} - \vec{j}$
$-3\vec{z} = -3 \times (\vec{i} - 3\vec{j}) = -3\vec{i} + 9\vec{j}$
$\vec{u} + 2\vec{v} + 3\vec{w} = 2\vec{i} + \vec{j} + 2 \times 3\vec{j} + 3 \times (-2\vec{i} + \vec{j}) = 2\vec{i} + \vec{j} + 6\vec{j} - 6\vec{i} + 3\vec{j} = -4\vec{i} + 10\vec{j}$
$2\vec{w} - \vec{x} + 3\vec{z} - \vec{y} = 2 \times (-2\vec{i} + \vec{j}) - (3\vec{i} + 2\vec{j}) + 3 \times (\vec{i} - 3\vec{j}) - (-3\vec{i})$ $= -4\vec{i} + 2\vec{j} - 3\vec{i} - 2\vec{j} + 3\vec{i} - 9\vec{j} + 3\vec{i} = -\vec{i} - 9\vec{j}$