RAPPELS :

x	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	π
cos x	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	-1

$\cos(-x) = \cos x$
$\cos(\pi - x) = -\cos x$
$\cos(\pi + x) = -\cos x$

EXERCICE 3A.1

Dans chaque cas, calculer le produit scalaire $\vec{u}.\vec{v}$:

$\|\vec{u}\| = 4 \quad \|\vec{v}\| = 3 \quad (\vec{u},\vec{v}) = \frac{\pi}{4}$ → $\vec{u}.\vec{v}$ =	$\|\vec{u}\| = 5 \quad \|\vec{v}\| = 2 \quad (\vec{u},\vec{v}) = \frac{\pi}{3}$ → $\vec{u}.\vec{v}$ =
$\|\vec{u}\| = 7 \quad \|\vec{v}\| = 3 \quad (\vec{u},\vec{v}) = -\frac{\pi}{6}$ → $\vec{u}.\vec{v}$ =	$\|\vec{u}\| = 352 \quad \|\vec{v}\| = 812 \quad (\vec{u},\vec{v}) = \frac{\pi}{2}$ → $\vec{u}.\vec{v}$ =
$\|\vec{u}\| = \sqrt{2} \quad \|\vec{v}\| = 2 \quad (\vec{u},\vec{v}) = \frac{3\pi}{4}$ → $\vec{u}.\vec{v}$ =	$\|\vec{u}\| = 4 \quad \|\vec{v}\| = 3 \quad (\vec{u},\vec{v}) = -\frac{2\pi}{3}$ → $\vec{u}.\vec{v}$ =
$\|\vec{u}\| = 2\sqrt{3} \quad \|\vec{v}\| = \frac{1}{2} \quad (\vec{u},\vec{v}) = \frac{5\pi}{6}$ → $\vec{u}.\vec{v}$ =	$\|\vec{u}\| = \sqrt{5} \quad \|\vec{v}\| = 2\sqrt{5} \quad (\vec{u},\vec{v}) = \pi$ → $\vec{u}.\vec{v}$ =

EXERCICE 3A.2

Dans chaque cas, calculer le produit scalaire :

→ $\vec{v}.\vec{w}$ =

→ $\vec{u}.\vec{w}$ =

→ $\vec{x}.\vec{y}$ =

→ $\vec{u}.\vec{y}$ =

→ $\vec{x}.\vec{w}$ =

→ $\vec{u}.\vec{x}$ =

→ $\vec{z}.\vec{v}$ =

→ $\vec{z}.\vec{w}$ =