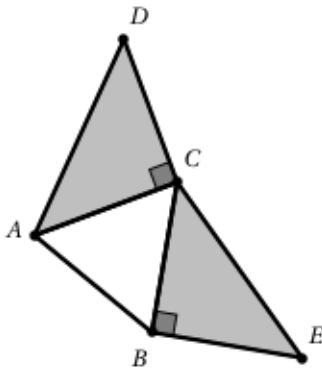


Correction DM 4.

Exercice 1



$$1^{\circ}) (\vec{AC}, \vec{AB}) \equiv -\frac{\pi}{3} [2\pi] \text{ donc } \text{MP: } -\frac{\pi}{3}$$

$$2^{\circ}) (\vec{AC}, \vec{BC}) \equiv (\vec{CA}, \vec{CB}) \equiv \frac{\pi}{3} [2\pi] \text{ donc } \text{MP: } \frac{\pi}{3}$$

$$3^{\circ}) (\vec{BC}, \vec{AB}) \equiv (\vec{BC}, \vec{BA}) + \pi [2\pi] \equiv \frac{4\pi}{3} [2\pi]$$

$$\begin{aligned} 4^{\circ}) (\vec{DC}, \vec{CE}) &\equiv (\vec{DC}, \vec{CA}) + (\vec{CA}, \vec{CB}) + (\vec{CB}, \vec{CE}) [2\pi] \\ &\equiv (\vec{CD}, \vec{CA}) + \pi + \frac{\pi}{3} + \frac{\pi}{4} [2\pi] \\ &\equiv \frac{\pi}{4} + \pi + \frac{7\pi}{12} [2\pi] \\ &\equiv \frac{25\pi}{12} \equiv \frac{\pi}{12} [2\pi] \end{aligned} \quad \text{donc MP: } -\frac{2\pi}{3} \quad \text{MP: } \frac{\pi}{12}$$

$$\begin{aligned} 5^{\circ}) (\vec{DA}, \vec{BE}) &\equiv (\vec{DA}, \vec{AB}) + (\vec{AB}, \vec{BE}) [2\pi] \\ &\equiv (\vec{AD}, \vec{AB}) + \pi + (\vec{BA}, \vec{BE}) + \pi [2\pi] \\ &\equiv -\frac{\pi}{4} - \frac{\pi}{3} + (-\frac{\pi}{3}) - \frac{\pi}{2} [2\pi] \\ &\equiv -\frac{17}{12} \pi \equiv \frac{7}{12} \pi \end{aligned} \quad \text{MP: } \frac{7\pi}{12}$$

$$\begin{aligned} 6^{\circ}) (\vec{CA}, \vec{EB}) &\equiv (\vec{CA}, \vec{CB}) + (\vec{CB}, \vec{EB}) [2\pi] \\ &\equiv \frac{\pi}{3} + (\vec{BC}, \vec{BE}) [2\pi] \\ &\equiv \frac{\pi}{3} - \frac{\pi}{2} [2\pi] \\ &\equiv -\frac{\pi}{6} [2\pi] \end{aligned} \quad \text{MP: } -\frac{\pi}{6}$$

Exercice 3 : $A(x) = \cos(x) - 4 \sin\left(\frac{\pi}{2} + x\right) + 5 \sin x$
 $A(x) = 6 \sin x - 4 \cos x$

$B(x) = \cos x + 2 \cos x - 5 \sin x$	$C(x) = -\cos x - \sin x - \cos x + \sin x$
$B(x) = 3 \cos x - 5 \sin x$	$C(x) = -2 \cos x$