

Bondes

Thier

GF

DM m<sup>o</sup> 12

Exercice 4 p. 14

$$f_1(t) = \cos(t) + \sin(t) \quad A = |1 - j| \text{ et } \varphi = \arg(1 - j)$$

$$a = 1 \quad b = 1 \quad A = \sqrt{1^2 + (-1)^2} = \sqrt{2} \text{ et } \varphi = \arctan\left(\frac{-1}{1}\right) = \frac{\pi}{4}$$

$$f_1(t) = \underline{\sqrt{2} \cos\left(t - \frac{\pi}{4}\right)}$$

$$\text{amplitude : } \underline{\sqrt{2}} \quad \text{déphasage : } \underline{\frac{\pi}{4}} \quad \text{période : } \underline{2\pi}$$

$$f_2(t) = \cos(t) - \sin(t) \quad A = |1 + j| \text{ et } \varphi = \arg(1 + j)$$

$$a = 1 \quad b = -1$$

$$A = \sqrt{1^2 + (-1)^2} = \sqrt{2} \quad \varphi = \arctan\left(\frac{1}{1}\right) = \frac{\pi}{4}$$

$$f_2(t) = \underline{\sqrt{2} \cos\left(t + \frac{\pi}{4}\right)}$$

$$\text{amplitude : } \underline{\sqrt{2}} \quad \text{déphasage : } \underline{\frac{\pi}{4}} \quad \text{période : } \underline{2\pi}$$

$$f_3(t) = \cos(\omega t) + \sqrt{3}\sin(\omega t) \quad A = |1 + j\sqrt{3}| \text{ et } \varphi = \arg(1 + j\sqrt{3})$$

$$a = 1 \quad b = \sqrt{3}$$

$$A = \sqrt{1^2 + (\sqrt{3})^2} = 2 \quad \text{et } \varphi = \arctan\left(\frac{\sqrt{3}}{1}\right) = \frac{\pi}{3}$$

$$f_3(t) = \underline{2 \cos\left(\omega t - \frac{\pi}{3}\right)}$$

$$\text{amplitude : } \underline{2} \quad \text{déphasage : } \underline{\frac{\pi}{3}} \quad \text{période : } \underline{\frac{2\pi}{\omega}}$$