

## TRIGONOMÉTRIE ET FONCTIONS E02C

### EXERCICE N°3 Bonus : $\tan(\pi/3)$ , $\tan(\pi/6)$ et $\tan(\pi/4)$

On rappelle la formule de seconde (adaptée ici) :

$$\text{Si } \alpha \in \left] 0 ; \frac{\pi}{2} \right[ \text{ alors } \tan(\alpha) = \frac{\sin(\alpha)}{\cos(\alpha)}$$

Déterminer les valeurs de  $\tan(\pi/3)$ ,  $\tan(\pi/6)$ , et  $\tan(\pi/4)$ .

$$\begin{aligned} \blacksquare \tan\left(\frac{\pi}{6}\right) &= \frac{\sin\left(\frac{\pi}{6}\right)}{\cos\left(\frac{\pi}{6}\right)} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{2} \times \frac{2}{\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{1 \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}} = \frac{\sqrt{3}}{3} \\ \blacksquare \tan\left(\frac{\pi}{4}\right) &= \frac{\sin\left(\frac{\pi}{4}\right)}{\cos\left(\frac{\pi}{4}\right)} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1 \\ \blacksquare \tan\left(\frac{\pi}{3}\right) &= \frac{\sin\left(\frac{\pi}{3}\right)}{\cos\left(\frac{\pi}{3}\right)} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \frac{\sqrt{3}}{2} \times \frac{2}{1} = \sqrt{3} \end{aligned}$$