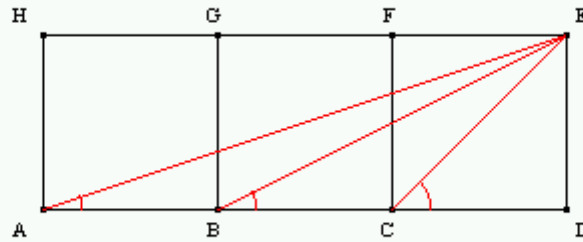


Soit trois carrés identiques accolés, comme ci-dessous :



On nomme a l'angle \widehat{DAE} , b l'angle \widehat{DBE} et c l'angle \widehat{DCE} .

1/ Calculer $\tan a$, $\tan b$, $\tan (a + b)$:

$$\tan a = \frac{DE}{AB} = \frac{1}{3}.$$

$$\tan b = \frac{DE}{BD} = \frac{1}{2}.$$

$$\tan (a + b) = \frac{\tan a + \tan b}{1 - \tan a \cdot \tan b} = \frac{\frac{1}{3} + \frac{1}{2}}{1 - \frac{1}{3} \cdot \frac{1}{2}} = \frac{\frac{5}{6}}{\frac{5}{6}} = 1.$$

2/ En déduire que $a + b = c = \frac{\pi}{4}$:

$$\tan (a + b) = 1 \Rightarrow a + b = \frac{\pi}{4}. \text{ Or, } \tan c = \frac{DE}{CB} = 1, \text{ soit } c = \frac{\pi}{4}.$$

$$\text{Donc : } a + b = c = \frac{\pi}{4}.$$