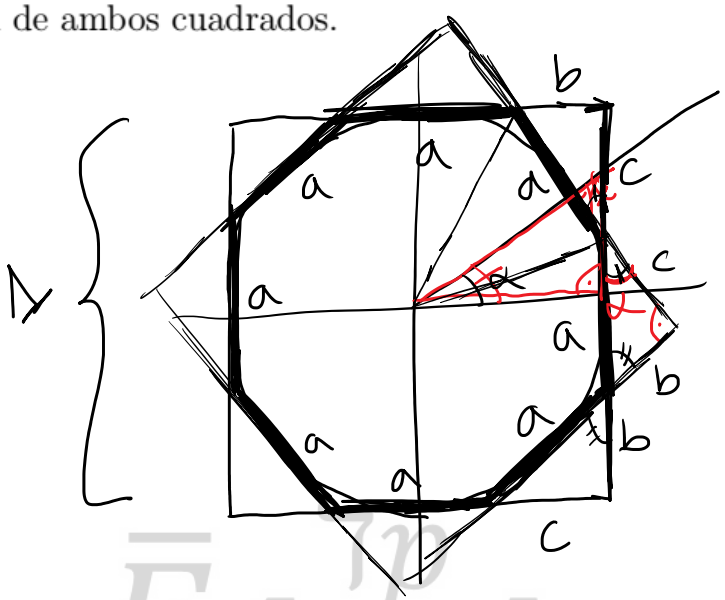
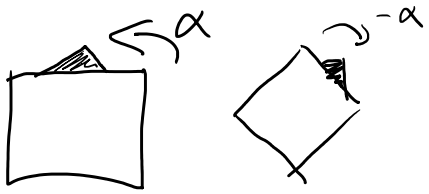
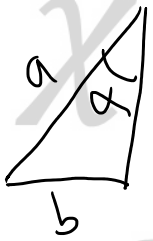
Un cuadrado $ABCD$ de centro O y lado 1 se gira un ángulo α alrededor de O. Hallar el área común de ambos cuadrados.





$$A = \frac{P \cdot a_p}{2}$$

$$\Rightarrow A = \frac{8a \cdot a_p}{2} - 4a \cdot a_p = 4a \cdot 0'5 = 2a \Rightarrow$$



$$\operatorname{sen}\alpha = \frac{b}{a} \rightarrow b = a\operatorname{sen}\alpha$$

$$\cos\alpha = \frac{c}{a} \rightarrow c = a\cos\alpha$$

$$a + b + c = 1 \rightarrow a + a\operatorname{sen}\alpha + a\cos\alpha = 1$$

$$a(1 + \operatorname{sen}\alpha + \cos\alpha) = 1$$

$$a = \frac{1}{1 + \operatorname{sen}\alpha + \cos\alpha}$$

$$\Rightarrow \boxed{A = \frac{2}{1 + \operatorname{sen}\alpha + \cos\alpha}}$$