

## PROBLEMAS DE TRIGONOMETRÍA

Problema 173:

Escribir  $(\operatorname{sen} a + \operatorname{tg} a) \cdot (\cos a + \operatorname{cotg} a)$  en función de  $\operatorname{sen} a$  y  $\cos a$

Solución Problema 173:

$$\begin{aligned}(\operatorname{sen} a + \operatorname{tg} a) \cdot (\cos a + \operatorname{cotg} a) &= \operatorname{sen} a \cdot \cos a + \operatorname{tg} a \cdot \cos a + \operatorname{sen} a \cdot \operatorname{cotg} a + \operatorname{tg} a \cdot \operatorname{cotg} a = \\ &= \operatorname{sen} a \cdot \cos a + \cos a \frac{\operatorname{sen} a}{\cos a} + \operatorname{sen} a \frac{\cos a}{\operatorname{sen} a} + \frac{\operatorname{sen} a}{\cos a} \cdot \frac{\cos a}{\operatorname{sen} a} = \operatorname{sen} a \cdot \cos a + \operatorname{sen} a + \cos a + 1 = \\ &= \operatorname{sen} a \cdot (\cos a + 1) + \cos a + 1 = \operatorname{sen} a \cdot (\cos a + 1) + (\cos a + 1) = (\cos a + 1) \cdot (\operatorname{sen} a + 1)\end{aligned}$$