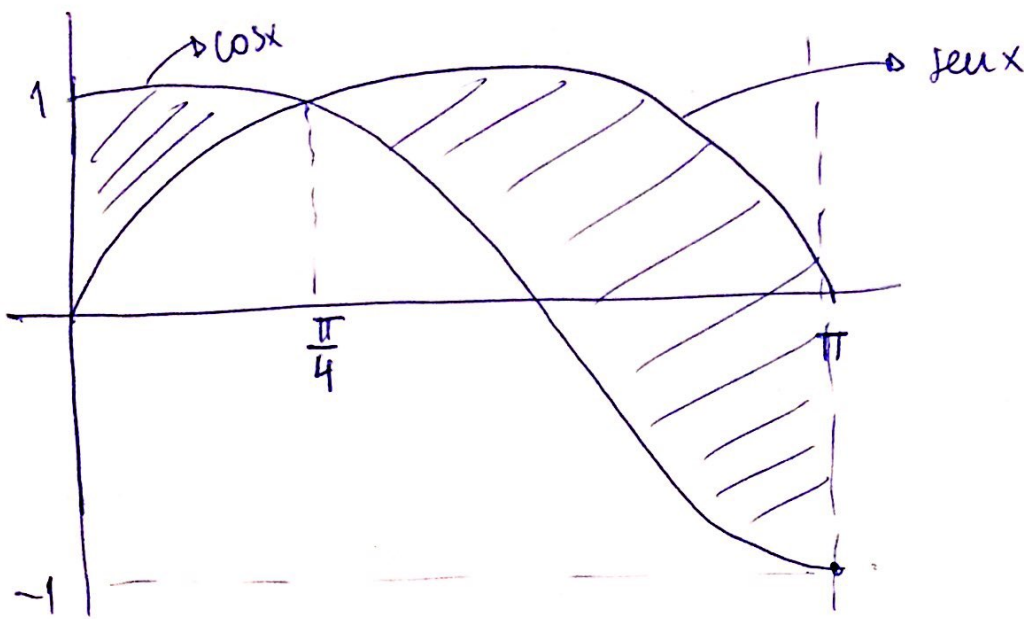


# Prueba P3a. Control 3.



El área pedida es la región achurada. Luego,

$$A = \int_0^{\pi/4} |\text{sen } x - \cos x| dx + \int_{\pi/4}^{\pi} |\text{sen } x - \cos x| dx.$$

(Del gráfico se obtiene el signo de  $(\text{sen } x - \cos x)$ ).  $\uparrow$  1 pt.

$$= \int_0^{\pi/4} (\cos x - \text{sen } x) dx + \int_{\pi/4}^{\pi} (\text{sen } x - \cos x) dx.$$

$$= \text{sen } x \Big|_0^{\pi/4} + \cos x \Big|_0^{\pi/4} = \cos x \Big|_{\pi/4}^{\pi} - \text{sen } x \Big|_{\pi/4}^{\pi}$$

$$= \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} - \cancel{1} + \cancel{1} + \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} = 4 \frac{\sqrt{2}}{2} = 2\sqrt{2} \quad \uparrow$$

1 pt