

EJERCICIO A28E2302-B:

$$\int \frac{1}{x\sqrt{x}} dx = \quad \text{¡CON CAMBIO DE VARIABLE!}$$

$$\boxed{\begin{array}{l} x = t^2 \\ dx = 2t dt \end{array}}$$

$$\begin{aligned} \int \frac{1}{x\sqrt{x}} dx &= \int \frac{1}{t^2 \sqrt{t^2}} 2t dt = 2 \int \frac{t dt}{t^2 \cdot t} = \\ &= 2 \int t^{-2} dt = 2 \cdot \frac{t^{-2+1}}{-2+1} = \frac{2 \cdot t^{-1}}{-1} = -\frac{2}{t} = \\ &= -\frac{2 \sqrt{x}}{\sqrt{x} \sqrt{x}} = -\frac{2\sqrt{x}}{x} + C \quad \text{☺} \end{aligned}$$

$$\int \frac{1}{x\sqrt{x}} dx = \quad \text{¡DIRECTAMENTE (INMEDIATA)!}$$

$$\begin{aligned} \int \frac{1}{x \cdot x^{1/2}} dx &= \int \frac{1}{x^{3/2}} dx = \int x^{-3/2} dx = \frac{x^{-3/2+1}}{-3/2+1} = \\ &= \frac{x^{-1/2}}{-1/2} = -2 \cdot x^{-1/2} = -2 \frac{1}{x^{1/2}} = \\ &= -\frac{2 \sqrt{x}}{\sqrt{x} \sqrt{x}} = -\frac{2\sqrt{x}}{x} + C \quad \text{☺} \end{aligned}$$