

EJERCICIO H2BE3315:

"EBAU CANARIAS SEPT 2002"

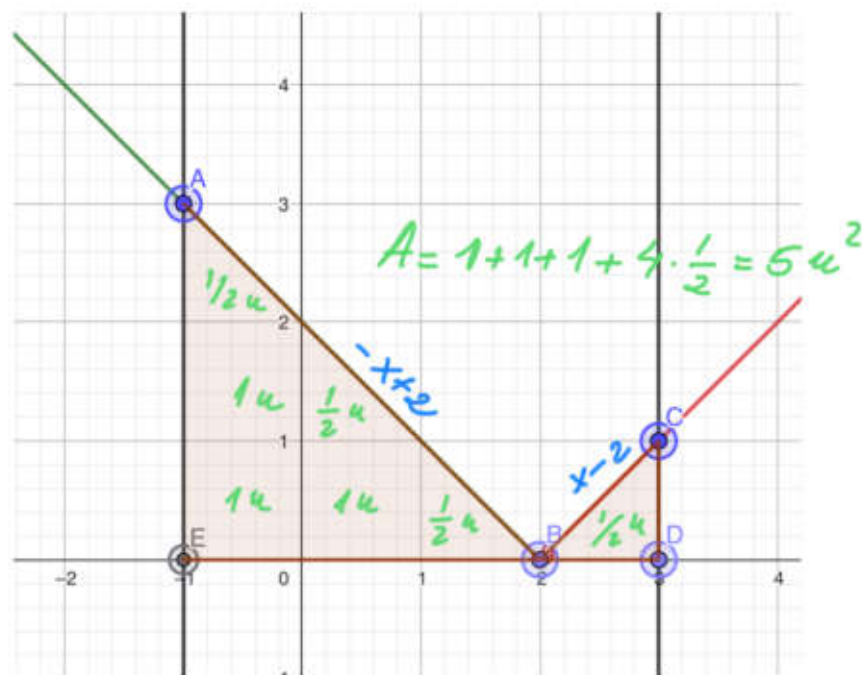
"achimagec.com"

$$y = |x-2| \quad \text{¡A Trozos!}$$

$$x-2=0 \quad \begin{array}{ccc} (-) & & (+) \\ x=2 & -\infty & \infty \end{array}$$

$$f(x) = \begin{cases} -(x-2) & \text{si } x < 2 \\ +(x-2) & \text{si } x \geq 2 \end{cases}$$

$$f(x) = \begin{cases} -x+2 & \text{si } x < 2 \\ x-2 & \text{si } x \geq 2 \end{cases}$$



$$\text{Area} = \int_{-1}^2 (-x+2) dx + \int_2^3 (x-2) dx$$

$$\int_{-1}^2 (-x+2) dx = \left[-\frac{x^2}{2} + 2x \right]_{-1}^2 =$$

$$= \left[-\frac{2^2}{2} + 2 \cdot 2 \right] - \left[-\frac{(-1)^2}{2} + 2(-1) \right] =$$

$$= \left(-\frac{4}{2} + 4 \right) - \left(-\frac{1}{2} - 2 \right) =$$

$$= \frac{-4+8}{2} - \frac{-1-4}{2} = \frac{4}{2} + \frac{5}{2} = \frac{9}{2}$$

$$\int_2^3 (x-2) dx = \left[\frac{x^2}{2} - 2x \right]_2^3 =$$

$$= \left(\frac{3^2}{2} - 2 \cdot 3 \right) - \left(\frac{2^2}{2} - 2 \cdot 2 \right) =$$

$$= \frac{9}{2} - 6 - \left(\frac{4}{2} - 4 \right) =$$

$$= \frac{9}{2} - 6 - 2 + 4 = \frac{9-12-4+8}{2} = \frac{1}{2}$$

$$\text{Area} = \frac{9}{2} + \frac{1}{2} = \frac{10}{2} = 5u^2$$