

Guía integral definida:

1) Calcular:

$$\int_{-1}^5 f(x) \, dx \quad \text{si}$$

$$f(x) = \begin{cases} x^2 - 1 & ; -1 \leq x \leq 3 \\ 8 & ; 3 < x < 4 \\ 2x & ; 4 \leq x \leq 5 \end{cases}$$

$$2) \text{ Calcular } \int_{-2}^2 f(x) \, dx$$

Donde

$$f(x) = \begin{cases} x + 1 & ; -2 \leq x < 0 \\ |x - 1| & ; 0 \leq x < 1 \\ x^2 & ; 1 \leq x < 2 \end{cases}$$

$$3) \text{ Calcular } \int_1^5 f(x) \, dx$$

$$\text{Donde } f(x) = \begin{cases} 2 & ; 0 \leq x < 2 \\ |x - 3| & ; x \geq 2 \end{cases}$$

4) Determine el valor de $m \in \mathbb{R}^+$

$$\int_{-1}^m (2x + 3) \, dx = 12$$

$$5) \text{ Sabiendo que } 3 \int_1^8 f(x) \, dx = 20, \int_1^3 2f(x) \, dx = 3;$$

$$\int_5^3 5f(x) \, dx = -1$$

$$\text{Calcular el valor de } M = 7 \int_5^8 f(x) \, dx =$$