

Entrenamiento Matemático--- Sesión 13 (24-10-2011)

Grupo

Dada la función

$$f(x) = \begin{cases} 2x & \text{si } x < 0 \\ \sin(2x) & \text{si } 0 \leq x \leq \pi/2 \\ \cos(x) & \text{si } \pi/2 < x < 2 \\ \frac{1}{x^2} & \text{si } x \geq 2 \end{cases}$$

Calcular:

$$\int_0^1 f(x) dx$$

$$\int_0^1 xf(x) dx$$

$$\int_{-1}^1 f(x) dx$$

$$\int_0^2 f(x) dx$$

$$\int_2^5 f(x) dx$$

$$\int_0^5 f(x) dx$$

$$\lim_{b \rightarrow \infty} \int_2^b f(x) dx$$