

REFERENCIAS BIBLIOGRAFICAS

ALUMNA: DIANA CITLALI CRUZ RIOS

MAESTRO: OJEDA

ASIGNATURA: MATEMATICAS
APLICADAS

SEXTO SEMESTRE, BACHILLERATO
EN ENFERMERIA

$$\int \text{SEN } 5x \cos 2x \, dx$$

SEN X COS Y = $\frac{1}{2}$ [SEN(X-Y) + SEN(X+Y)]

$$\int \frac{1}{2} [\text{SEN}(5x-2x) + \text{SEN}(5x+2x)]$$

$$\frac{1}{2} \int \text{SEN } 3x \, dx + \frac{1}{2} \int \text{SEN } 7x \, dx$$

$$\frac{1}{2} \left[-\frac{1}{3} \cos 3x - \frac{1}{7} \cos 7x \right] + C$$

$$-\frac{1}{6} \cos 3x - \frac{1}{14} \cos 7x + C$$

$$\int \text{SEN } 2x \cos 2x \, dx$$

x multiply

$$\frac{1}{2} \int \text{SEN } 2(2x) \, dx$$

$$\frac{1}{2} \int \text{SEN } 4x \, dx$$

$$-\frac{1}{2} \left(\frac{1}{4} \right) \cos 4x + C$$

$$-\frac{1}{8} \cos 4x + C$$

$$\int \text{SEN } \frac{x}{2} \text{SEN } \frac{x}{3} \, dx$$

$$\int \frac{1}{2} [\text{SEN}(\frac{x}{6}) - \cos(\frac{5x}{6})] \, dx$$

$$\frac{1}{2} \int \text{SEN}(\frac{x}{6}) \, dx - \frac{1}{2} \int \cos \frac{5x}{6} \, dx$$

$$-\frac{3}{2} \cos(\frac{x}{6}) - \frac{2}{5} \text{SEN } \frac{5x}{6} + C$$

$$\int \text{SEN}^2 x + \text{COS}^2 x \, dx$$

$$\int 1 \, dx = \underline{x + C}$$

$$\int 1 + \text{TAN}^2 2x \, dx$$

$$\textcircled{1} 1 + \text{TAN}^2 x = \text{SEC}^2 x$$

$$\int \text{SEC}^2 x \, dx = \frac{1}{2} \int \text{SEC}^2 x \, dx$$

$$\underline{\frac{1}{2} \text{TAN } 2x + C}$$

$$\int 1 + \text{COT}^2 2x \, dx$$

$$\textcircled{2} 1 + \text{COT}^2 x = \text{CSC}^2 x$$

$$\int \text{CSC}^2 2x \, dx$$

$$\underline{-\frac{1}{2} \text{COT}^2 2x + C}$$

$$\textcircled{3} \text{SEN } x \text{COS } x = \frac{1}{2} \text{SEN } 2x$$

$$\int \text{SEN } 3x \text{COS } x \, dx$$

$$\int \frac{1}{2} \text{SEN } 6x \, dx =$$

$$\frac{1}{2} \int \text{SEN } 6x \, dx$$

$$\frac{1}{2} - \frac{1}{6} \text{COS } 6x + C = \underline{\underline{-\frac{1}{12} \text{COS } 6x + C}}$$

⊕

$$\int \text{SEN}^2 x \, dx = \textcircled{4} \text{SEN}^2 x = \frac{1}{2} (1 - \text{COS } 2x)$$

$$\int \frac{1}{2} (1 - \text{COS } 2x) \, dx = \int \left(\frac{1}{2} - \frac{1}{2} \text{COS } 2x \right) \, dx$$

$$= \frac{1}{2} \int dx - \frac{1}{2} \int \text{COS } 2x \, dx$$

$$= \frac{x}{2} - \frac{1}{2} \left(\frac{1}{2} \text{SEN } 2x \right) + C$$

$$\underline{\left(\frac{x}{2} - \frac{1}{4} \text{SEN } 2x + C \right)}$$

$$\int \text{COS}^2 3x \, dx$$

$$\textcircled{5} \text{COS}^2 x = \frac{1}{2} (1 + \text{COS } 2x)$$

$$\int \frac{1}{2} (1 + \text{COS } 6x) \, dx = \frac{1}{2} \int dx + \frac{1}{2} \int \text{COS } 6x \, dx$$

$$\frac{x}{2} + \frac{1}{2} \left(\frac{1}{6} \text{SEN } 6x \right) + C$$

$$\underline{\left(\frac{x}{2} + \frac{1}{12} \text{SEN } 6x + C \right)}$$