"MATERIA". MATEMÁTICA APLICADA

NOMBRE DEL DOCENTE. JUAN JOSE OJEDA

PRESENTA: EJERCICIO

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SEXTO SEMESTRE

LICENCIATURA

SEMIESCOLARIZADO

FECHA DE ENTREGA 22/05/2021

$$2 \quad \int \text{sen } 3x \text{ sen } 2x \, dx = \int \frac{1}{2} \left[\cos (3x - 2x) - \cos (3x + 2x) \right] dx$$

$$= \frac{1}{2} \int \cos x \, dx - \frac{1}{2} \int \cos 5x \, dx = \frac{1}{2} \text{ sen } x - \frac{1}{2} \text{ sen } - \frac{1}{2} \frac{1}{5} \text{ sen } 5x \, dx$$

$$\boxed{\frac{1}{2} \text{ sen } x - \frac{1}{10} \text{ sen } 5x + C}$$

$$\int \text{sen } 3x \cos 5x \, dx = \int \frac{1}{2} \left[\text{sen } (3x - 5x) + \text{sen } (3x + 5x) \right] dx$$

$$3 \quad \frac{1}{2} \int \text{sen } (-2x) \, dx + \frac{1}{2} \cdot 8x \, dx \cdot \frac{1}{2} \cdot \frac{1}{2} \cos (-2x) + \frac{1}{2} \cdot \frac{1}{8} (\cos 8x)$$

$$+ C = \boxed{\frac{1}{4} \cos (-2x) \frac{1}{16} \cos = 8x + C}$$

$$\int \cos 4x \cos 2x \, dx = \frac{1}{2} \left[\cos (4x - 2x) + \cos (4x + 2x) \right] dx$$

$$= \frac{1}{2} \int \cos 2x \, dx + \frac{1}{2} \int \cos 6x \, dx = \frac{1}{2} \cdot \frac{1}{2} \text{ sen } 2x + \frac{1}{2} \cdot \frac{1}{6} \text{ sen } 6x + C$$

$$4 \quad = \boxed{\frac{1}{4} \text{ sen } 2x + \frac{1}{12} \text{ sen } 6x + C}$$

$$\int \sqrt{1 - \cos x} \, dx = \int \text{sen}^2 \frac{1}{x} \, dx = 2 \int \sqrt{\text{sen}^4 \frac{1}{x}} \, dx = 2 \text{ sen } \frac{1}{x} \, dx$$

$$5 \quad = \boxed{-2x \cos \frac{1}{x} + C}$$

Citlali López Jiménez.