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Grupo: A

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

$= \boxed{\frac{x}{2} - \frac{1}{4}\text{SEN}\,x + c}$

2 = $\int \text{SEN}^3 \frac{x}{3}\,dx = \int (\text{SEN}\frac{x}{3} \cdot \text{SEN}\frac{x}{3})\,dx = \int [\text{SEN}\frac{x}{3} \cdot (\frac{1}{2}(-\cos\frac{2x}{3})]\,dx$

$= \int (\text{SEN}\frac{x}{3} \cdot (\frac{1}{2} - \frac{1}{2}\cos\frac{2x}{3}))\,dx = \int \frac{1}{2}\text{SEN}\frac{x}{3}\,dx - \frac{1}{2}\int \text{SEN}\frac{x}{3}$

$= \frac{3}{2}\cos\frac{x}{3} + \int \frac{1}{2}\text{SEN}(-\frac{x}{3}) + \frac{1}{2}\text{SEN}(\frac{x}{3})\,dx.$

$= \boxed{-\frac{3}{2}\cos\frac{x}{3} - \frac{3}{2}\cos(\frac{-x}{3}) + \frac{1}{4}\cos x + c}$

3 = $\int \text{SEN}^2 x + \cos^2 x\,dx = \int dx = \boxed{x + c}$

5 = $\int \sec^4 2x\,dx = \int (\sec^2 x)\,dx = \int (\text{TAN}x \cdot \text{TAN}x)\,dx$

$= \int (\text{TAN}^2 x)\,dx = \int (\sec^2 x - 1)\,dx = \int \sec^2 x\,dx - \int dx.$

$= \boxed{\text{TAN}x + x + c}$

6 = $\int \text{SEN}\,2x \cos 3x\,dx = \frac{1}{2}\int \text{SEN}(-x)\,dx + \text{SEN}\,5x\,dx$

$= \boxed{\frac{1}{2}\cos x + \frac{1}{10}\cos 5x + c.}$

7 = $\int (1+\cos 3x)^{3/3}\,dx \int (2\cos^2 3x)^{3/2}\,dx = \int (2\cos 3x)^{6/3}\,dx$

$= \int (2\cos 3x)^2\,dx = \boxed{\frac{(2\cos 3x)^3}{3} + c}$

8 = $\int 1 - \text{SEN}\,2x\,dx = \int 1 - \cos(\frac{11^2}{2} - x)\,dx \int dx - \int \cos\frac{11}{2}^2 = x dx$

$= \boxed{x - \text{SEN}\frac{11^2}{2} - \frac{x^2}{2} + c.}$