

Polculo II

1. $\int \cos 2x \, dx$

$$\hookrightarrow \int \cos(2x) \, dx = \frac{1}{2} \sin(2x) + C$$

2. $\int \cos 34x \, dx$

$$\hookrightarrow \int \cos(34x) \, dx = \frac{1}{34} \sin(34x) + C$$

3. $\int \cos^2 x \, dx$

$$\hookrightarrow \int \cos^2(x) \, dx = \frac{1}{2} \left(x + \frac{1}{2} \sin(2x) \right) + C$$

4. $\int \sin^5 x \, dx$

$$\hookrightarrow \int \sin^5(x) \, dx = -\cos(x) + \frac{2\cos^3(x)}{3} - \frac{\cos^5(x)}{5} + C$$

5. $\int 8 \cos^4 2\pi x \, dx$

$$\hookrightarrow \int 8 \cos^4(2\pi) x \, dx = 4x^2 + C$$

6. $\int 16 \sin^4 x \cos^2 x \, dx$

$$\int 16 \sin^4(x) \cos^2(x) \, dx = 6x - \frac{2}{3} \sin^3(\cos(x)) - 3 \sin(2x) + \frac{8}{3} \sin^5(x) \cos(x) - \frac{5}{2} (2x - \sin(2x)) + C$$

$$7 - \int \sec^2 x \operatorname{tg} x \, dx$$

$$\hookrightarrow \int \sec^2(x) \tan(x) \, dx = \frac{\tan^2(x)}{2} + C$$

$$8 - \int \sec x \operatorname{tg}^2 x \, dx$$

$$\hookrightarrow \int \sec(x) \tan^2(x) \, dx = \frac{1}{2} \sec(x) \tan(x) - \frac{1}{2} \ln |\tan(x) + \sec(x)| + C$$

$$9 - \int \sec^3 x \operatorname{tg} x \, dx$$

$$\hookrightarrow \int \sec^3(x) \tan(x) \, dx = \frac{1}{3} \sec^3(x) + C$$

$$10 - \int \sec^3(x) \tan^3(x) \, dx = \frac{\sec^5(x)}{5} - \frac{\sec^3(x)}{3} + C$$

$$11 - \int \sec^2 x \operatorname{tg}^2 x \, dx$$

$$\hookrightarrow \int \sec^2(x) \tan^2(x) \, dx = \frac{\tan^2(x)}{3} + C$$

$$12 - \int \sec^4 x \operatorname{tg}^2 x \, dx$$

$$\int \sec^4(x) \tan^2(x) \, dx = \frac{\tan^3(x)}{3} + \frac{\tan^5(x)}{5} + C$$

$$13 - \int \sec^4 3x \, dx$$

$$\int \sec^4(3x) \, dx = \frac{1}{3} \left(\tan(3x) + \frac{\tan^3(3x)}{3} \right) + C$$

$$14 - \int \sec^6 x \, dx$$

$$\hookrightarrow \int \sec^6(x) \, dx = \tan(x) + \frac{2 \tan^3(x)}{3} + \frac{\tan^5(x)}{5} + C$$

$$15 - \int 4 \tan^3 x \, dx$$

$$\hookrightarrow \int 4 \tan^3(x) \, dx = 4 \left(-\ln|\sec(x)| + \frac{\sec^2(x)}{2} \right) + C$$