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TEMA: PROBLEMARIO

GRADO: 6º A

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BIBLIOGRAFIA:

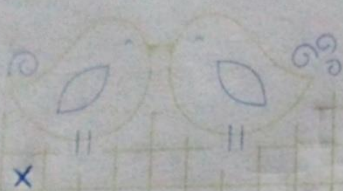


$$\begin{aligned}
 1. \int \sin^{-1} 3x^2 dx &= \frac{\sqrt{1-(3)^2(x^2)^2}}{3} + x \sin^{-1}(3x^2) + C \\
 &= \frac{\sqrt{1-9x^4}}{3} + x \sin^{-1} 3x^2 + C \\
 &= \sqrt{\frac{1}{3}-3x^4} + \frac{x}{\sin 3x^2} + C
 \end{aligned}$$

$$\begin{aligned}
 2. \int \tan^{-1} 1/x^2 dx &= x^2 \tan^{-1}(1/x^2) - \frac{\ln|(1)^2(x^2)^2+1|}{2(1)} + C \\
 &= x^2 \tan^{-1}(1/x^2) - \frac{\ln|(2)(x^4)+1|}{2} + C \\
 &= \frac{x^2}{\tan 1/x^2} - \frac{\ln|3x^4|}{2} + C
 \end{aligned}$$

$$\begin{aligned}
 3. \int \cot^{-1} \sqrt{2} x dx &= \frac{\ln|(\sqrt{2})^2(x)^2+1|}{2(\sqrt{2})} + x \cot^{-1}(\sqrt{2} x) + C \\
 &= \frac{\ln|3x^2|}{2 \cdot \sqrt{2}} + \frac{x}{\cot \sqrt{2} x} + C
 \end{aligned}$$

$$\begin{aligned}
 4. \int \cos^{-1} 5x dx &= x \cos^{-1}(5x) - \frac{\sqrt{1-(5)^2(x)^2}}{5} + C \\
 &= \frac{x}{\cos 5x} - \frac{\sqrt{1-25x^2}}{5} + C \\
 &= \frac{x}{\cos 5x} - \sqrt{\frac{1}{5}-25x^2} + C
 \end{aligned}$$



$$5. \int \csc^{-1} 2x^2 dx = \frac{\ln |2\sqrt{(2)^2(x^2)^2 - 1} + 2x^2|}{2} + x^2 \csc^{-1}(2x^2) + C$$

$$= \frac{\ln |2\sqrt{4x^2 - 1} + 2x^2|}{2} + \frac{x^2}{\csc 2x^2} + C$$

$$= \frac{\ln |2\sqrt{5x^4}|}{2} + \frac{x^2}{\csc 2x^2} + C$$

$$6. \int \text{sen}^{-1} \sqrt{2}x^2 dx = \frac{\sqrt{1 - (\sqrt{2})^2(x^2)^2}}{\sqrt{2}} + x^2 \text{sen}^{-1}(\sqrt{2}x^2) + C$$

$$\frac{\sqrt{1 - 2x^4}}{1.4} + \frac{x^2}{\text{sen} \sqrt{2}x^2} + C$$

$$\frac{\sqrt{1.4 - 1.4x^4}}{1.4} + \frac{x^2}{\text{sen} \sqrt{2}x^2} + C$$