

EJERCICIO M2BE3385:

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$$\int \frac{3}{2+x^2} dx =$$

$$\int \frac{f'(x)}{1+[f(x)]^2} dx = \arctan f(x)$$

$$= \frac{3}{2} \int \frac{dx}{1 + \frac{x^2}{2}} = \frac{3}{2} \int \frac{dx}{1 + \left(\frac{x}{\sqrt{2}}\right)^2} =$$

$$= \frac{3 \cdot \sqrt{2}}{2} \int \frac{\frac{1}{\sqrt{2}} dx}{1 + \left(\frac{x}{\sqrt{2}}\right)^2} =$$

$$= \frac{3 \cdot \sqrt{2}}{2} \arctan \frac{x}{\sqrt{2}} + C$$