

$$\bullet \int \frac{(1-x)^2}{1+x} dx$$

$$(a-b)^2 = a^2 + b^2 - 2ab$$

$$\int \frac{(1-x)^2}{1+x} dx = \int \frac{1+x^2-2x}{1+x} dx =$$

$$= \int \frac{x^2-2x+1}{x+1} dx = \textcircled{*}$$

$$\begin{array}{r} x^2 - 2x + 1 \quad \overline{) \frac{x+1}{x-3}} \\ x^2 + x \\ \hline 0 - 3x + 1 \\ -3x - 3 \\ \hline 0 + 4 \end{array}$$

$$\frac{\text{dividendo}}{\text{divisor}} = \text{cociente} + \frac{\text{resto}}{\text{divisor}}$$

$$\textcircled{*} = \int \left( x-3 + \frac{4}{x-3} \right) dx =$$

$$= \frac{x^2}{2} - 3x + 4 \ln|x-3| + C$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C$$

$$\int \frac{f'(x)}{f(x)} dx = \ln|f(x)| + C$$