Integral Indefinida - Cambio de variable

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Solución $\int z^t (1 + z^t)^{20} \, dt$

- $u = 1 + z^t$
- $du = 0 + z^t \ln(z) \, dt$
- $dt = \dfrac{du}{z^t \ln(z)}$

$* \dfrac{d}{du} a^u = a^u \ln(a)$

$* \int x^n dx = \dfrac{x^{n+1}}{n+1}$

$$\int z^t (u)^{20} \frac{du}{z^t \ln(z)} = \frac{1}{\ln(z)} \int u^{20} \, du$$

$$= \frac{1}{\ln(z)} \cdot \frac{1}{21} \cdot u^{21} + C$$

$$= \frac{1}{21 \ln(z)} (1 + z^t)^{21} + C$$