> $f := x \to \ln(1+x)$

$$f := x \to \ln(1+x) \tag{1}$$

> $Tf := unapply(convert(taylor(f(x), x=0, 9), polynom), x)$

$$Tf := x \to x - \frac{1}{2}x^2 + \frac{1}{3}x^3 - \frac{1}{4}x^4 + \frac{1}{5}x^5 - \frac{1}{6}x^6 + \frac{1}{7}x^7 - \frac{1}{8}x^8 \tag{2}$$

> $evalf(Tf(1))$

$$0.6345238095 \tag{3}$$

> $evalf(f(1))$

$$0.6931471806 \tag{4}$$

> $n := 1 : \textbf{while } evalf\left(|unapply(convert(taylor(f(x), x=0, n), polynom), x)(1) - f(1)|\right)$
> $> \frac{1}{100000} \textbf{ do } n := n + 1000 \textbf{ end do}: n$

$$50001 \tag{5}$$

> $g := x \to \ln\left(\frac{1+x}{1-x}\right)$

$$g := x \to \ln\left(\frac{1+x}{1-x}\right) \tag{6}$$

> $Tg := unapply(convert(taylor(g(x), x=0, 9), polynom), x)$

$$Tg := x \to 2x + \frac{2}{3}x^3 + \frac{2}{5}x^5 + \frac{2}{7}x^7 \tag{7}$$

> $evalf\left(Tg\left(\frac{1}{3}\right)\right)$

$$0.6931347573 \tag{8}$$

> $evalf\left(g\left(\frac{1}{3}\right)\right)$

$$0.6931471806 \tag{9}$$

> $n := 1 : \textbf{while } evalf\left(\left|unapply(convert(taylor(g(x), x=0, n), polynom), x)\left(\frac{1}{3}\right) - g\left(\frac{1}{3}\right)\right|\right)$
> $> \frac{1}{100000} \textbf{ do } n := n + 1 \textbf{end do}: n$

$$10 \tag{10}$$

> $restart$

> $Rf := unapply\left(\frac{x^{n+1} \cdot diff(f(x), x\$n) \cdot \text{Theta} \cdot x}{(n+1)!}, [x, n, \text{Theta}]\right)$

$$Rf := (x, n, \Theta) \to \frac{x^{n+1}\left(\frac{d^n}{dx^n} f(x)\right)\Theta x}{(n+1)!} \tag{11}$$

>