R. L'HÔPITAL

$$\lim_{x \to 1} \frac{\ln x}{x-1} = \lim_{x \to 1} \frac{1/x}{1} = 1$$

$\boxed{\frac{0}{0}}$ Ind

$$\lim_{x \to 0} \left[\frac{1}{\ln(1+x)} - \frac{1}{x} \right] = \frac{1}{\ln 1} - \frac{1}{0} = \frac{1}{0} - \frac{1}{0} = \boxed{\infty - \infty}$$

Ind

|| ← ¡operamos!

$$\lim_{x \to 0} \frac{x - \ln(1+x)}{x \cdot \ln(1+x)} = \frac{0-0}{0 \cdot 0} = \boxed{\frac{0}{0}} \text{ Ind}$$

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$$\lim_{x \to 0} \frac{1 - \frac{1}{1+x}}{1 \cdot \ln(1+x) + x \cdot \frac{1}{1+x}} = \lim_{x \to 0} \frac{\frac{\cancel{1}+x - \cancel{1}}{\cancel{(1+x)}}}{\frac{(1+x) \cdot \ln(1+x) + x}{\cancel{(1+x)}}}$$

$$= \lim_{x \to 0} \frac{x}{(1+x) \cdot \ln(1+x) + x} = \frac{0}{0+0} = \boxed{\frac{0}{0}} \text{ Ind}$$

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$$\lim_{x \to 0} \frac{1}{1 \cdot \ln(1+x) + \cancel{(1+x)} \frac{1}{\cancel{(1+x)}} + 1}$$

||

$$\lim_{x \to 0} \frac{1}{1 \underbrace{\ln(1+x)}_{0} + 1 + 1} = \frac{1}{2}$$