

Taylor Series

Function:

Variable:

Point:

Order:

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Computing...

Input interpretation:

series	$\frac{U}{f \sin(\tan^{-1}(\frac{H}{L} + \frac{x}{2L}))}$	point	$x = 0$
		order	x^2

Series expansion at x=0:

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$$\frac{L U \sqrt{\frac{H^2}{L^2} + 1}}{f H} - \frac{x \left(L^3 U \sqrt{\frac{H^2}{L^2} + 1} \right)}{2 \left(f H^2 \left(H^2 + L^2 \right) \right)} + \frac{U x^2 \sqrt{\frac{H^2}{L^2} + 1} \left(3 H^2 L^3 + 2 L^5 \right)}{8 f H^3 \left(H^2 + L^2 \right)^2} + O(x^3)$$

(Taylor series)

Series expansion at x=0:

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$$L U \sqrt{\frac{H^2}{L^2} + 1} - x \left(L^3 U \sqrt{\frac{H^2}{L^2} + 1} \right) + L^3 U x^2 \sqrt{\frac{H^2}{L^2} + 1} \left(3 H^2 + 2 L^2 \right) -$$

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