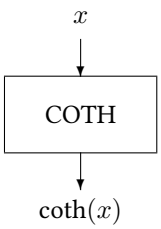
Block COTH

The COTH block returns the hyperbolic cotangent of its input.





Name	COTH
Function	fb0068
Inputs	1
Outputs	1
Parameters	0
Strings	0
Group	S

Inputs

1 Any signal x

Outputs

1 Hyperbolic cotangent

Parameters

None

Strings

None

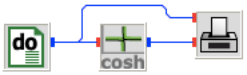
Description

The hyperbolic cotangent is defined as

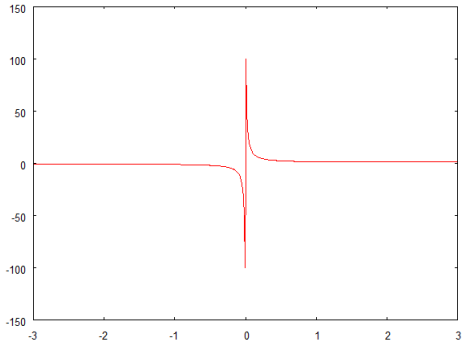
$$\coth(x) = \frac{\exp(x) + \exp(-x)}{\exp(x) - \exp(-x)}$$

In order to avoid division by zero, $\coth(x)$ is set to zero for $|x| < 10^{-5}$.

coth.vseit



A DO block varies x from -3 to 3 in steps of 0.01. The COTH block calculates $\coth(x)$ and the PLOT block displays the graph on screen.



See also Blocks COSH, CSCH, SCH, SINH, TANH.