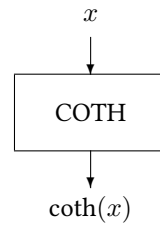


Block COTH

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

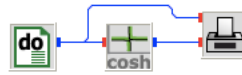
None

Description The hyperbolic cotangent is defined as

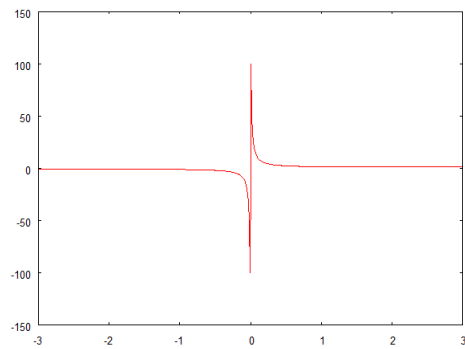
$$\coth(x) = \frac{\exp(x) + \exp(-x)}{\exp(x) - \exp(-x)}$$

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**.