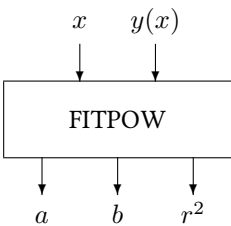


Block FITPOW

The FITPOW block approximates the input data by a power function.



Name	FITPOW
Function	fb0036
Inputs	2
Outputs	3
Parameters	0
Strings	0
Group	I

Inputs

- 1 Any value x
- 2 Corresponding $y(x)$ value

Outputs

- 1 Fit coefficient a
- 2 Fit coefficient b
- 3 Regression coefficient r^2

Parameters

None

Strings

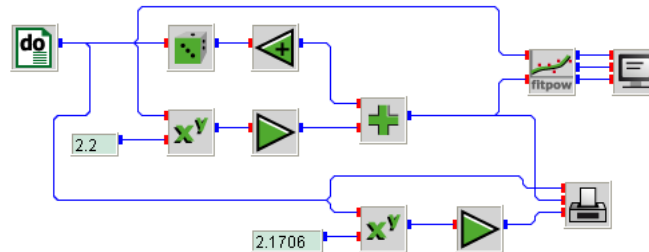
None

Description The blocks input data are approximated by the power function

$$y = ax^b$$

The successors of this block are executed only at the end of the simulation run.

fitpow.vseit



A **DO** block runs x values from 1 to 10 in steps of 0.01. The data are used by an **EXPG** block with exponent 2.2 as defined by a connected **CONST** block. The result is multiplied by a factor 0.08 by a **GAIN** block. Some noise is generated in the upper part of the block diagram and added to $0.08 x^{2.2}$. This signal is used by the **FITPOW** block.

The noise is generated by a **RAN1** block with an offset of -0.5 calculated by the **OFFSET** block.

The outputs a , b , and r^2 are displayed numerically by a **SCREEN** block.

8.29010606E-02 2.1706350 0.88110483

Assuming that the result is already known ($a = 0.0829$ and $b = 2.1706$) the logarithmic equation $y' = ax^b$ is calculated and plotted against the input data by a **PLOT** block.

