

# triangle\_2.xbe

## Attributes

```
xbe name=triangle_2 evaluate=yes limit_tstep=yes
# triangle source
# similar to triangle_1; this is symmetric with period T
Jacobian: constant
input_vars:
output_vars: y
aux_vars:
iparms:
+ flag_frequency=0
+ flag_period=1
sparms:
# L1 is the level at the beginning of the first interval
rparms:
+ T=1
+ frequency=1
+ L1=-1
+ L2=1
+ t0=0
+ slope1=0
+ slope2=0
+ eps1=0
+ T1=0
+ T2=0
stparms:
igparms:
outparms: y
```

## Description

`triangle_2.xbe` is a symmetric triangle wave source with  $y$  as its output. The parameters have the following meaning:

**T:** time period. This parameter applies if `flag_period` is 1.

**frequency:** frequency. This parameter applies if `flag_frequency` is 1.

**L1, L2:**  $y$  goes from L1 to L2 in the first half period and from L2 to L1 in the second half period.

**t0:** An “offset” time interval by which the waveform is shifted (to the right).

The effect of the various parameters of `triangle_2.xbe` on  $y(t)$  is shown in the following figures.

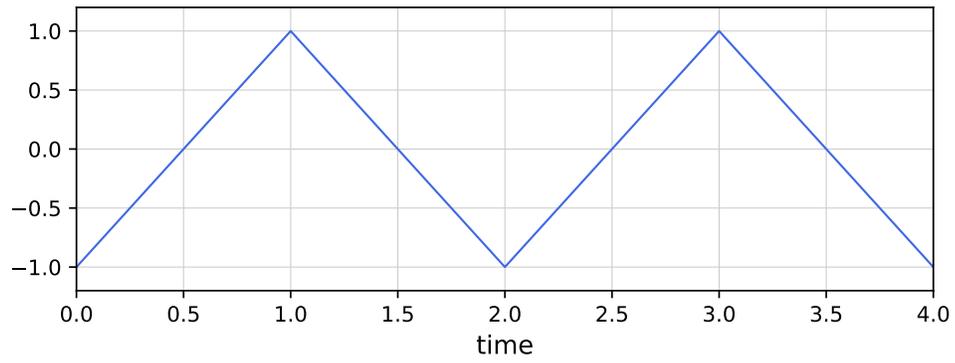


Figure 1:  $y(t)$  obtained with `flag_period = 1`, `flag_frequency = 0`,  $T = 2$ ,  $L1 = -1$ ,  $L2 = 1$ ,  $\tau_0 = 0$ .

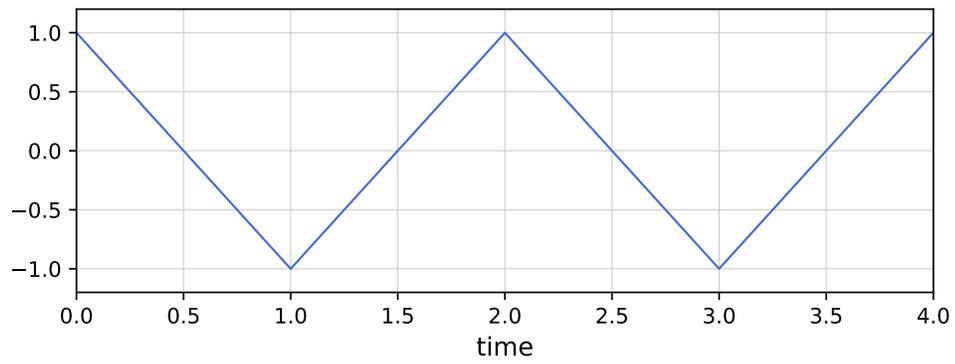


Figure 2:  $y(t)$  obtained with `flag_period = 1`, `flag_frequency = 0`,  $T = 2$ ,  $L1 = 1$ ,  $L2 = -1$ ,  $\tau_0 = 0$ .

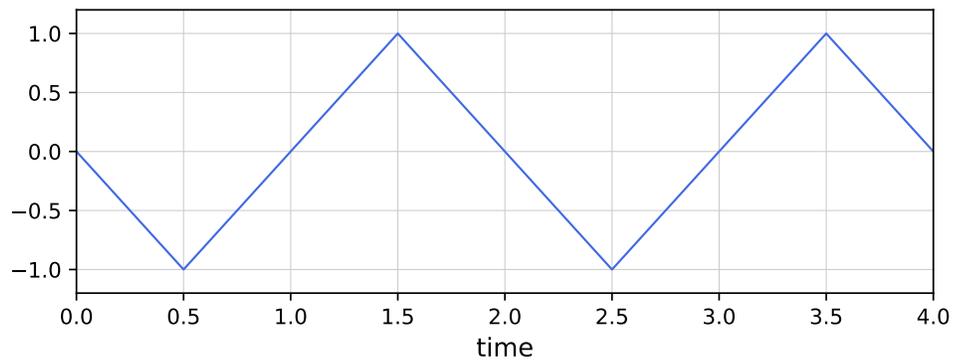


Figure 3:  $y(t)$  obtained with `flag_period = 1`, `flag_frequency = 0`,  $T = 2$ ,  $L1 = -1$ ,  $L2 = 1$ ,  $\tau_0 = 0.5$ .