

triangle_1.xbe

Attributes

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

Description

triangle_1.xbe is a triangle wave source with y as its output. The parameters have the following meaning:

T1: The first part of one period. y goes from L1 to L2 in this interval.

T2: The second part of one period. y goes from L2 to L1 in this interval.

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

The effect of the various parameters of triangle_1.xbe on $y(t)$ is shown in the following figures.

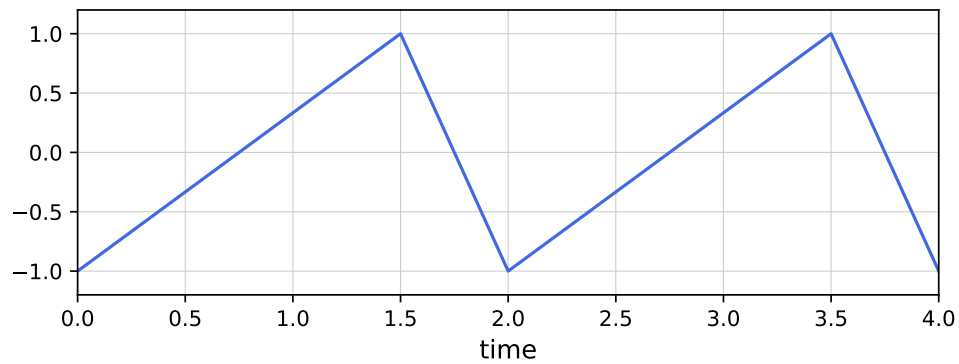


Figure 1: $y(t)$ obtained with $T1 = 1.5$, $T2 = 0.5$, $L1 = -1$, $L2 = 1$, $\tau_0 = 0$.

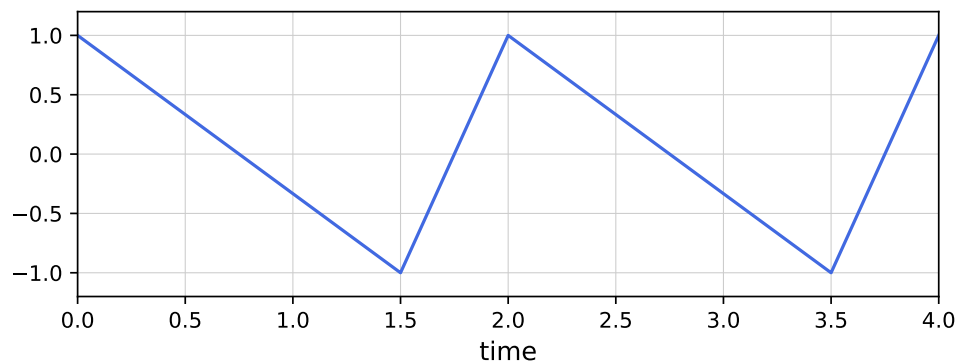


Figure 2: $y(t)$ obtained with $T1 = 1.5$, $T2 = 0.5$, $L1 = 1$, $L2 = -1$, $\tau_0 = 0$.

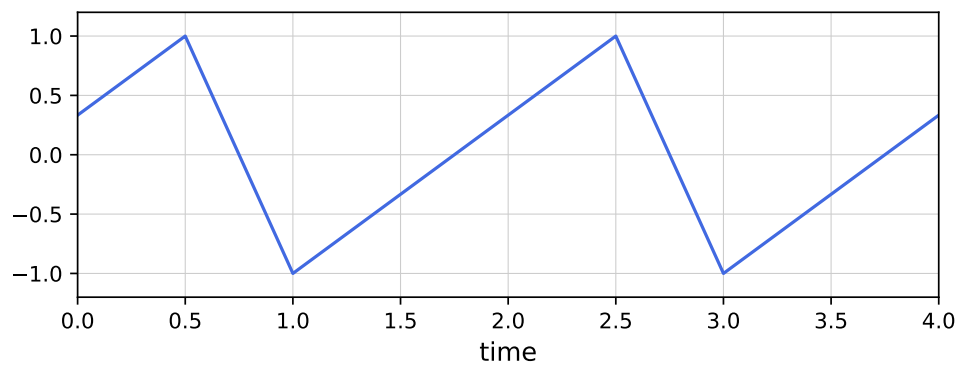


Figure 3: $y(t)$ obtained with $T1 = 1.5$, $T2 = 0.5$, $L1 = -1$, $L2 = 1$, $\tau_0 = 1$.