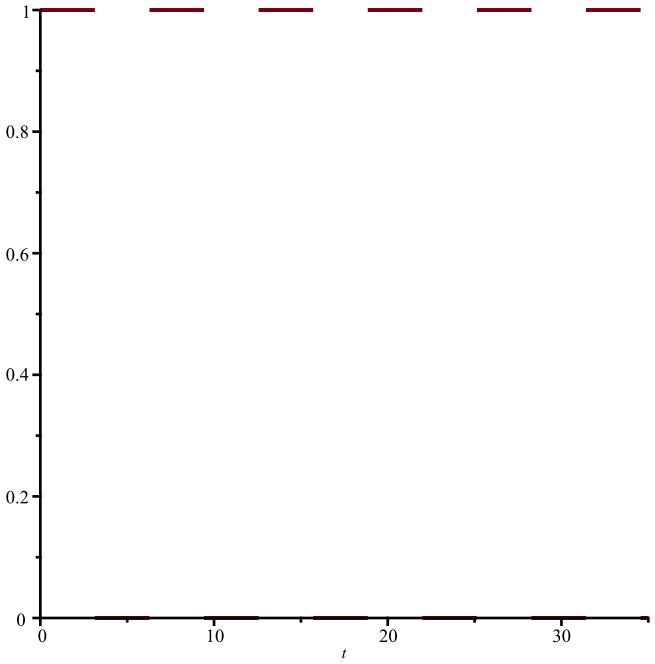
```
> with(inttrans);
```

[*addtable*, *fourier*, *fouriercos*, *fouriersin*, *hankel*, *hilbert*, *invfourier*, *invhilbert*, *invlaplace*, *invmellin*, *laplace*, *mellin*, *savetable*, *setup*]

```
>  u := t -> sum((-1)^n*Heaviside(t - n*Pi), n=0..13);
```

$$u := t \mapsto \sum_{n=0}^{13} (-1)^n \cdot \text{Heaviside}(t - n \cdot \pi)$$

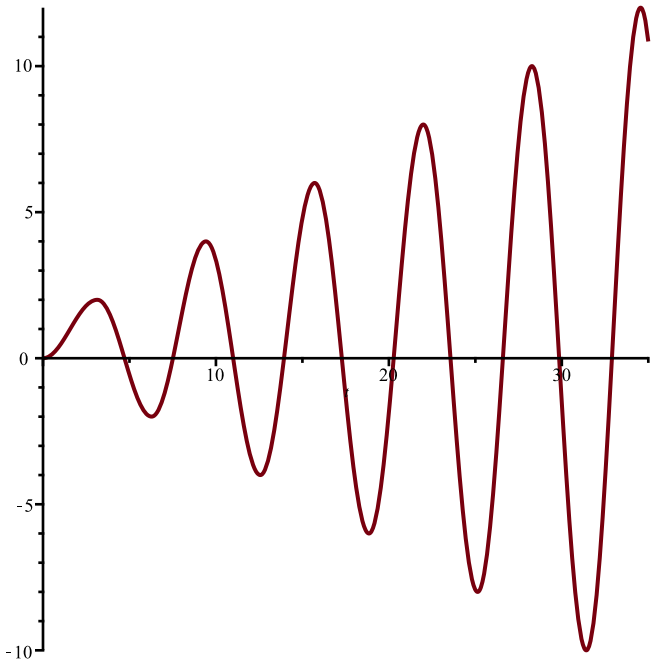
```
> plot( u(t), t=0..35, discont=true);
```




```
> v := t-> sum(Heaviside(t - n*Pi),n=0..13);
```

$$v := t \mapsto \sum_{n=0}^{13} \text{Heaviside}(t - n \cdot \pi)$$

```
> plot(u(t)-cos(t)*v(t),t=0..35);
```




```
> laplace( u(t), t, s);
```

$$\frac{1}{s}\left(1 - e^{-s\pi} + e^{-2s\pi} - e^{-3s\pi} + e^{-4s\pi} - e^{-5s\pi} + e^{-6s\pi} - e^{-7s\pi} + e^{-8s\pi} - e^{-9s\pi} + e^{-10s\pi} - e^{-11s\pi} + e^{-12s\pi} - e^{-13s\pi}\right)$$

```
>  u := t -> sum((-1)^n*Heaviside(t - n*Pi), n=0..infinity);
```

$$u := t \mapsto \sum_{n=0}^{\infty} (-1)^n \cdot \mathrm{Heaviside}(t - n\cdot\pi)$$

```
>  laplace( u(t), t, s);
```

$$\frac{1}{s\left(1 + e^{-s\pi}\right)}$$

```
>  invlaplace(%,s,t);
```

$$\frac{1}{2} + \frac{(-1)^{\left\lfloor \frac{t}{\pi} \right\rfloor}}{2} \tag{1}$$

```
>  convert( sin(t-Pi)*(Heaviside(t-Pi)-Heaviside(t-2*Pi)),
  piecewise);
```

$$\begin{cases} 0 & t < \pi \\ undefined & t = \pi \\ -\sin(t) & t < 2\pi \\ undefined & t = 2\pi \\ 0 & 2\pi < t \end{cases} \tag{2}$$