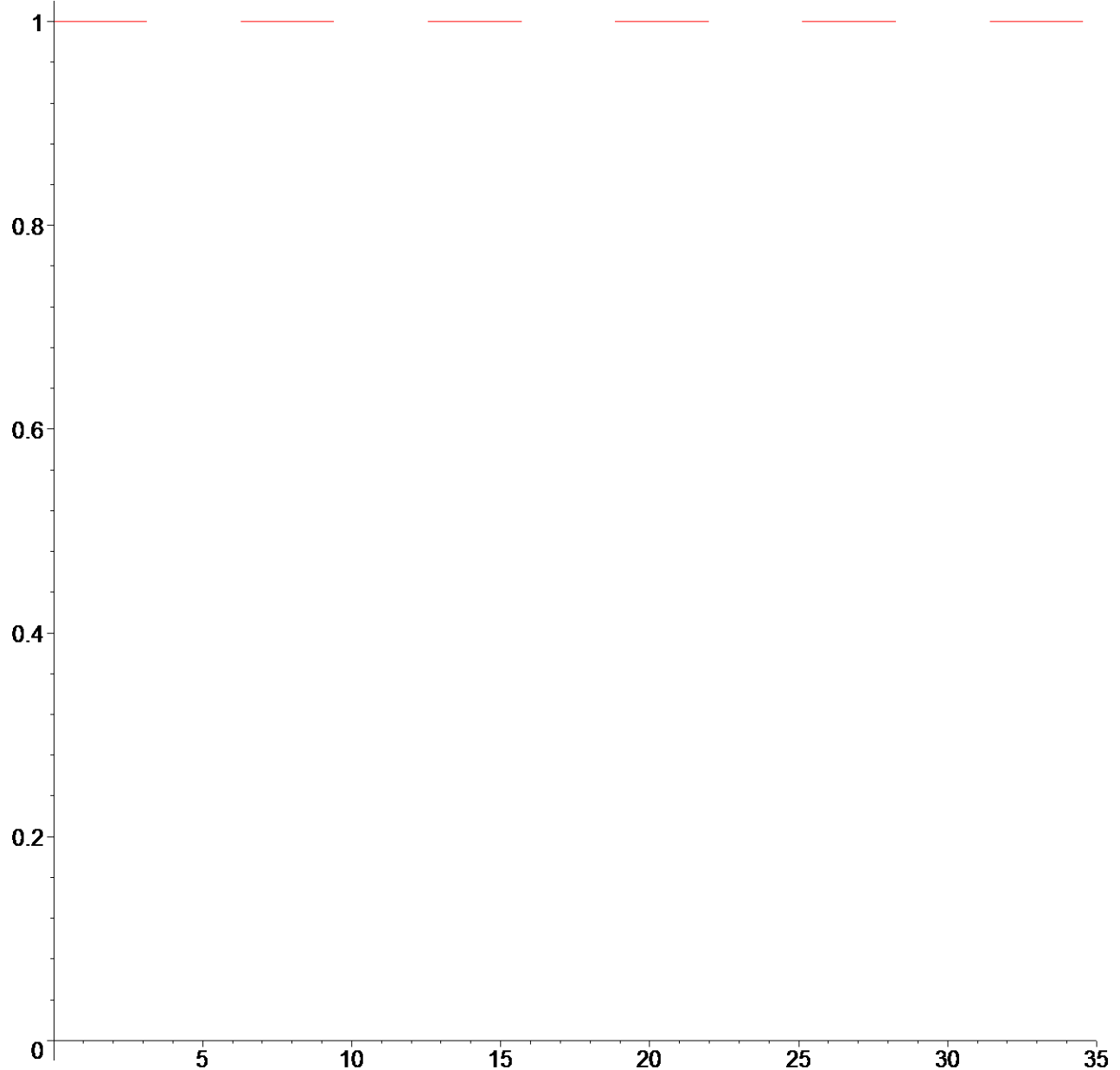


```
> with(inttrans);
[addtable, fourier, fouriercos, fouriersin, hankel, hilbert, invfourier, invhilbert, invlaplace,
  invmellin, laplace, mellin, savetable]
```

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

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

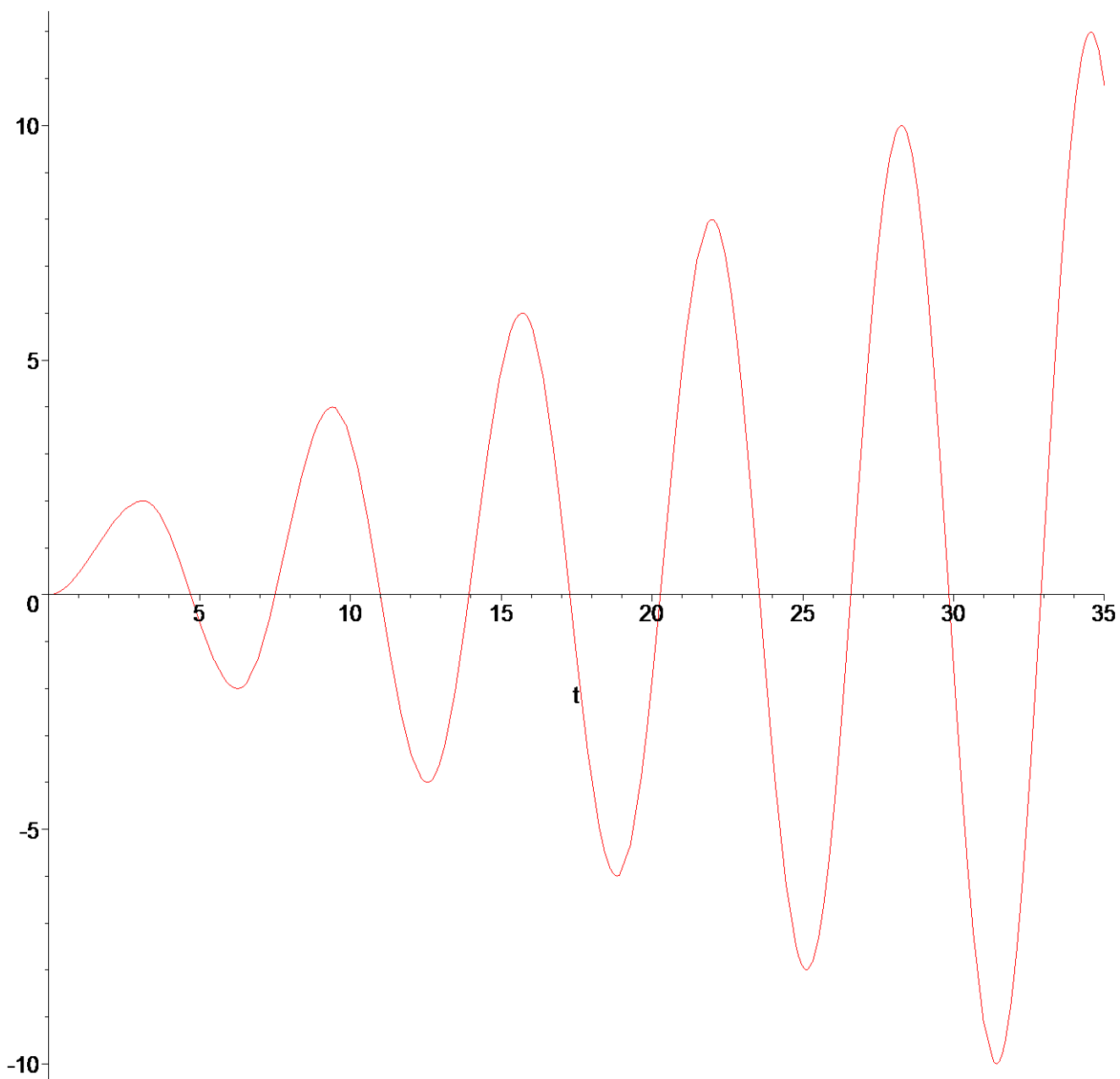
```
> plot( u(t), t=0..35, scont=true);
```



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

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

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



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

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

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

$$u := t \rightarrow \sum_{n=0}^{\infty} (-1)^n \text{Heaviside}(t - n \pi)$$

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

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

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

$$\frac{1}{2} + \frac{1}{2} (-1)^{\text{floor}\left(\frac{t}{\pi}\right)}$$

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

$$\left\{ \begin{array}{ll} 0 & t < \pi \\ \text{undefined} & t = \pi \\ -\sin(t) & t < 2 \pi \\ \text{undefined} & t = 2 \pi \\ 0 & 2 \pi < t \end{array} \right.$$

```
>
```