```
> restart;
> interface(version);
```

Standard Worksheet Interface, Maple 2022.2, Windows 10, October 23 2022 Build ID 1657361 (1

```
> _EnvUseHeavisideAsUnitStep:=true;
  expr:=(s+exp(-Pi*s)-exp(-2*Pi*s))/(s*(s^2+2*s+2));
  inttrans:-invlaplace(expr,s,t);
  Y:=convert(%,piecewise);
  #remove all entries in piecwise which has undefined
```

$$\_EnvUseHeavisideAsUnitStep := true$$

$$expr := \frac{s + e^{K\,\pi s}\,K\;e^{K\,2\,\pi s}}{s\left(s^2 + 2\,s + 2\right)}$$

$$e^{K\,t}\sin(t) + \frac{\left(K\;1 + e^{K\,t + 2\,\pi}\left(\cos(t) + \sin(t)\right)\right)\,\mathrm{Heaviside}\left(t K\;2\,\pi\right)}{2} + \frac{\left(1 + e^{K\,t + \pi}\left(\cos(t) + \sin(t)\right)\right)\,\mathrm{Heaviside}\left(t K\;\pi\right)}{2}$$

$$Y := \begin{cases} e^{K\,t}\sin(t) & t < \pi \\ e^{K\,t}\sin(t) + \frac{1}{2} + \frac{e^{K\,t + \pi}\left(\cos(t) + \sin(t)\right)}{2} & t < 2\,\pi \\ e^{K\,t}\sin(t) + \frac{e^{K\,t + 2\,\pi}\left(\cos(t) + \sin(t)\right)}{2} + \frac{e^{K\,t + \pi}\left(\cos(t) + \sin(t)\right)}{2} & 2\,\pi \le t \end{cases} \quad (2$$

```
>
```