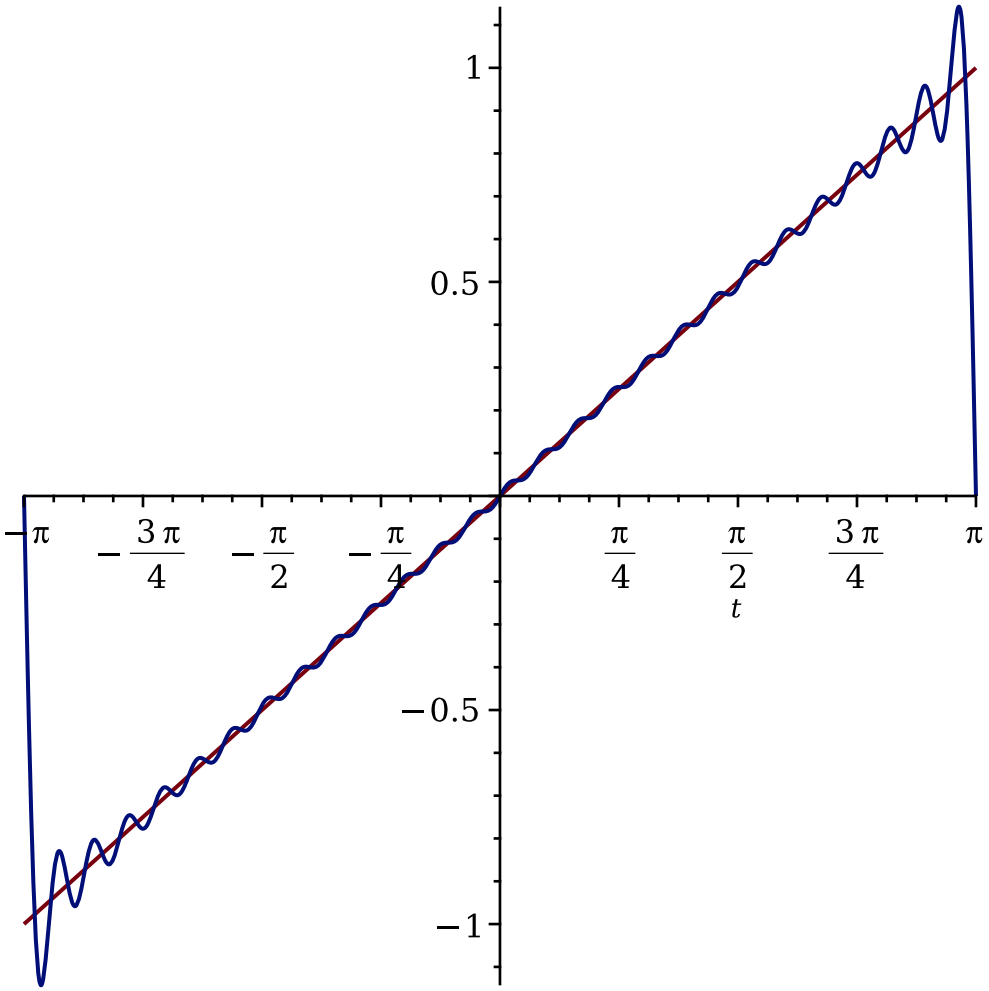
```
> restart : with(LinearAlgebra) : with(plots) : with(plottools) : with(inttrans) :
      with(VectorCalculus) : SetCoordinates('cartesian'[x, y, z]) :
> f := t→t/Pi :
> original := plot(f(t), t = -Pi..Pi) :
> b_n := n→1/Pi·int(f(t)·sin(n·t), t = -Pi..Pi)
```

$$b\_n := n \mapsto \pi^{-1} \cdot \left(\int_{-\pi}^{\pi} f(t) \cdot \sin(n \cdot t)\, dt \right) \qquad (1)$$

```
> N := 27 :
> f_approx := evalf(add(b_n(n)·sin(n·t), n = 1..N)) :
> approx_plot := plot(f_approx, t = -Pi..Pi) :
> display(original, approx_plot)
```




```
>
```