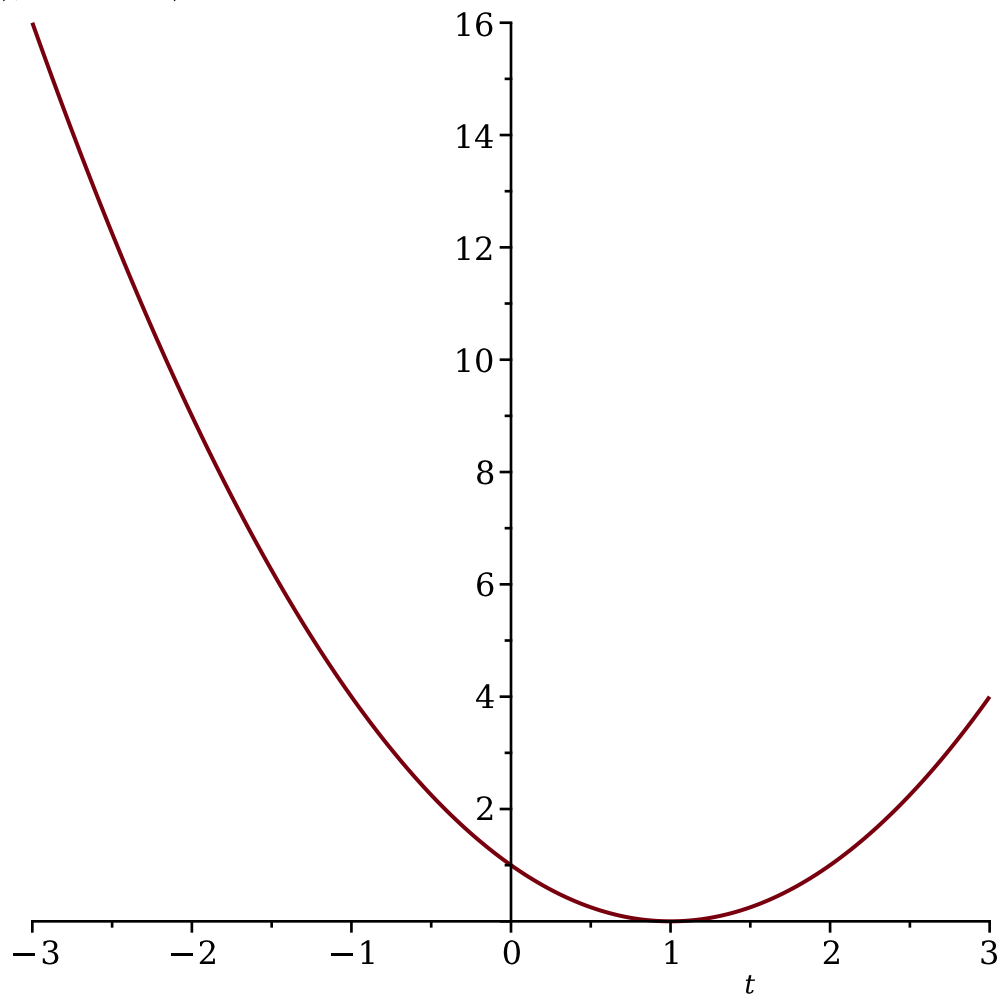


```

> restart: with(plots):
> f := t -> (t - 1)^2:
> plot(f(t), t = -3..3)

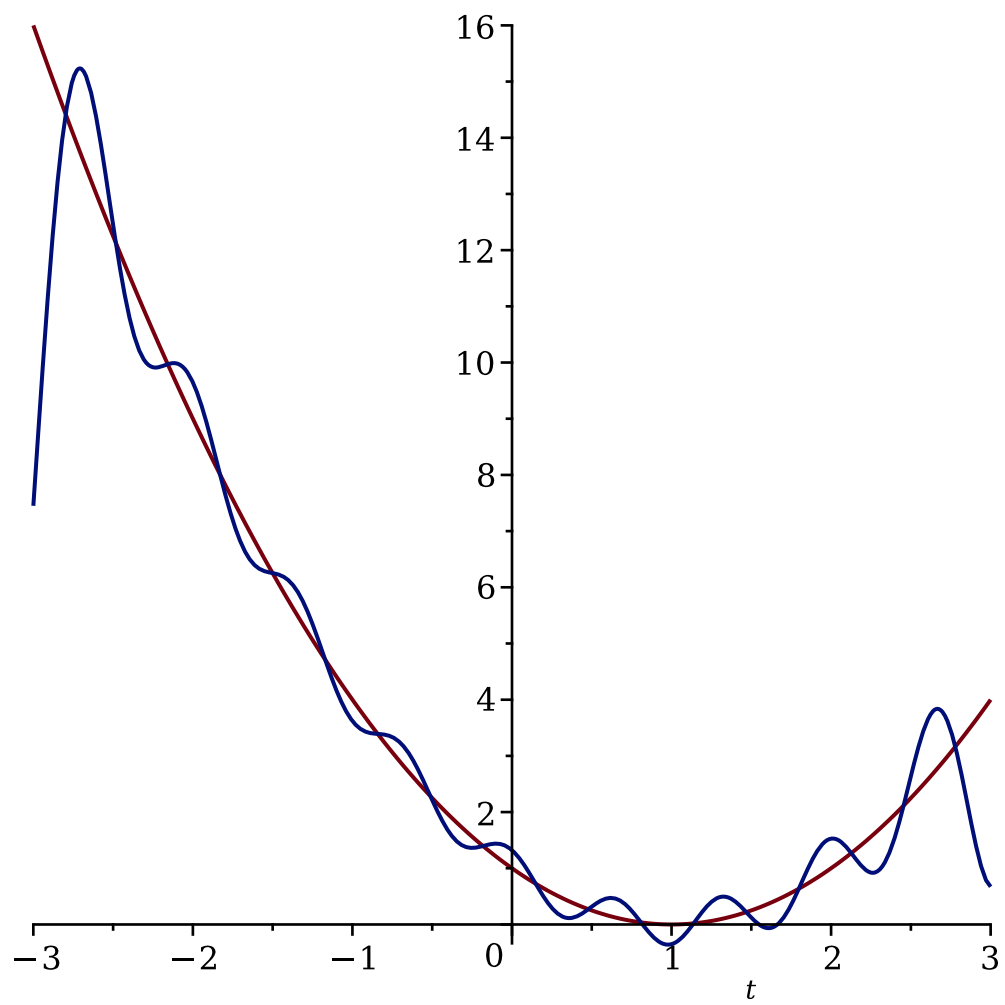
```



```

> # We need to calculate both a_n and b_n
> a_n := n -> 1/Pi * int(f(t) * cos(n*t), t = -3..3):
> b_n := n -> 1/Pi * int(f(t) * sin(n*t), t = -3..3):
> f_approx := a_n(0)/2 + add(b_n(n) * sin(n*t) + a_n(n) * cos(n*t), n = 1..9):
> plot([f(t), f_approx], t = -3..3)

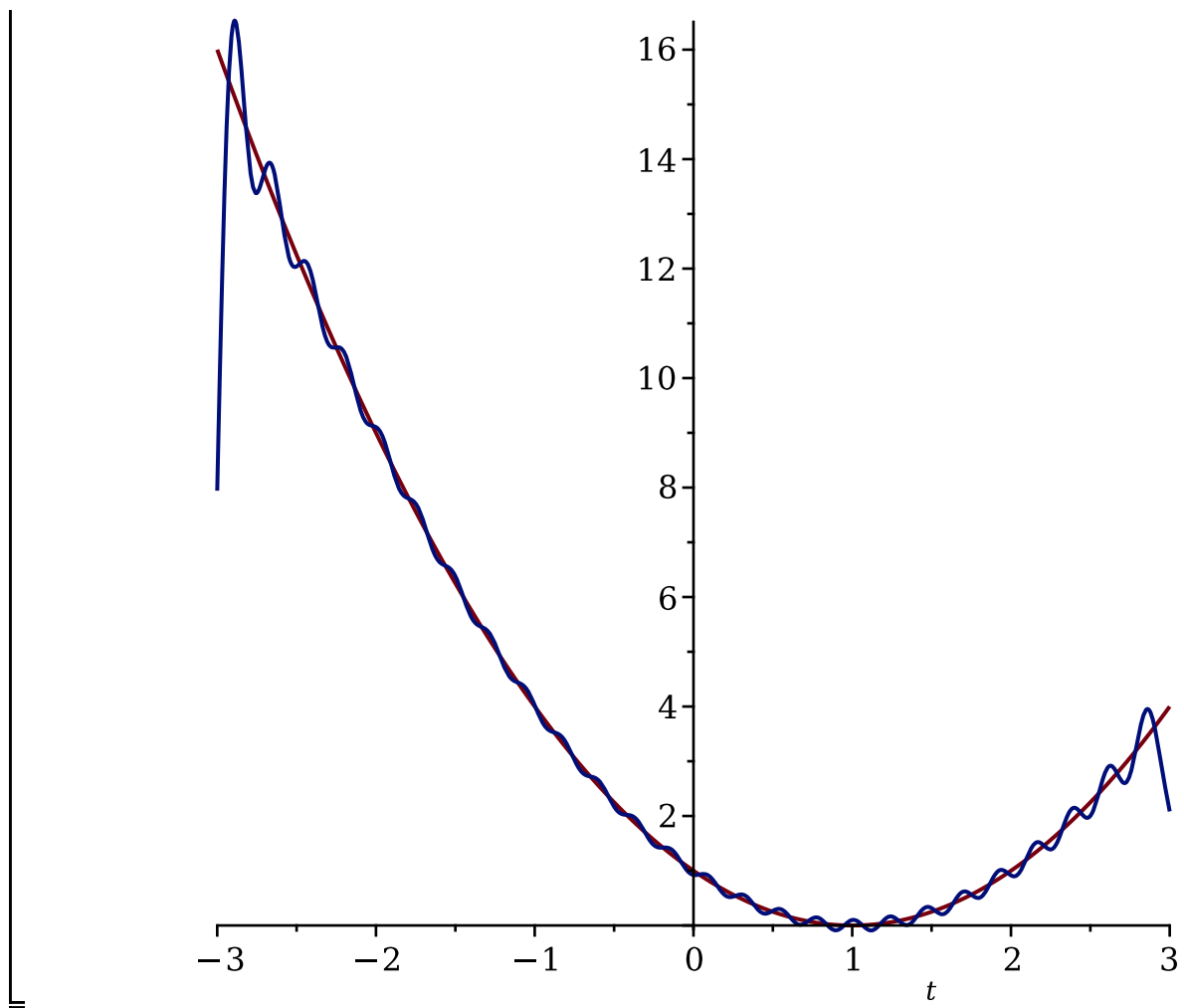
```



```
>
```

```
> f_approx := a_n(0)/2 + add(b_n(n)*sin(n*t) + a_n(n)*cos(n*t), n = 1..27) :
```

```
> plot([f(t), f_approx], t = -3..3)
```



> # We can see the divergence in the end points (gibbs)

