```
> picard:=(x0,f,x)->unapply(x0+int(f(x(tau)),tau=0..t),t);
```

$$picard := (x0, f, x) \rightarrow \text{unapply}\left(x0 + \int_0^t f(x(\tau))\, d\tau,\ t\right)$$

```
> u0:=t->1;
```

$$u0 := 1$$

```
> u1:=picard(1,x->x^2,u0);
```

$$u1 := t \rightarrow t + 1$$

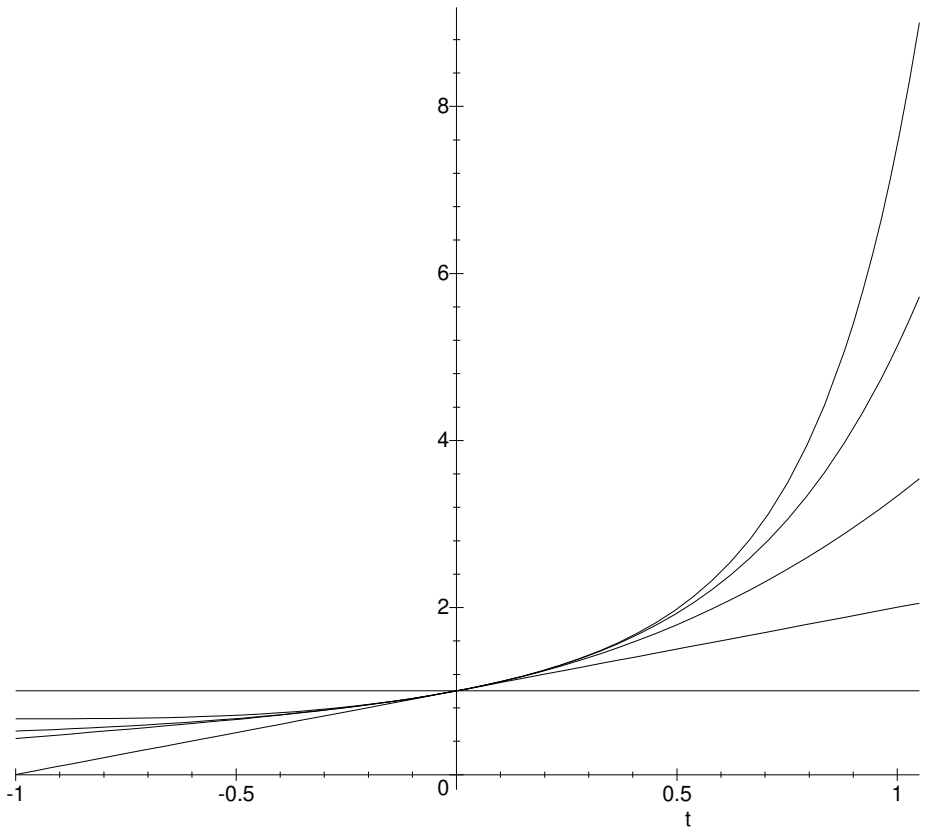
```
> u2:=picard(1,x->x^2,u1);
```

$$u2 := t \rightarrow 1 + t + t^2 + \frac{1}{3} t^3$$

```
> u3:=picard(1,x->x^2,u2);
```

$$u3 := t \rightarrow 1 + \frac{1}{63} t^7 + \frac{1}{9} t^6 + \frac{1}{3} t^5 + \frac{2}{3} t^4 + t^3 + t^2 + t$$

```
> u4:=picard(1,x->x^2,u3);
```

$$u4 := t \rightarrow 1 + \frac{1}{59535} t^{15} + \frac{71}{252} t^8 + \frac{1}{3969} t^{14} + \frac{29}{63} t^7 + \frac{1}{567} t^{13} + \frac{2}{3} t^6 + \frac{1}{126} t^{12} + \frac{13}{15} t^5 + \frac{5}{189} t^{11} + t^4 + \frac{22}{315} t^{10} + t^3 + \frac{86}{567} t^9 + t^2 + t$$

```
> plot([u0(t),u1(t),u2(t),u3(t),u4(t)],t=-1..1.05,color='black');
```