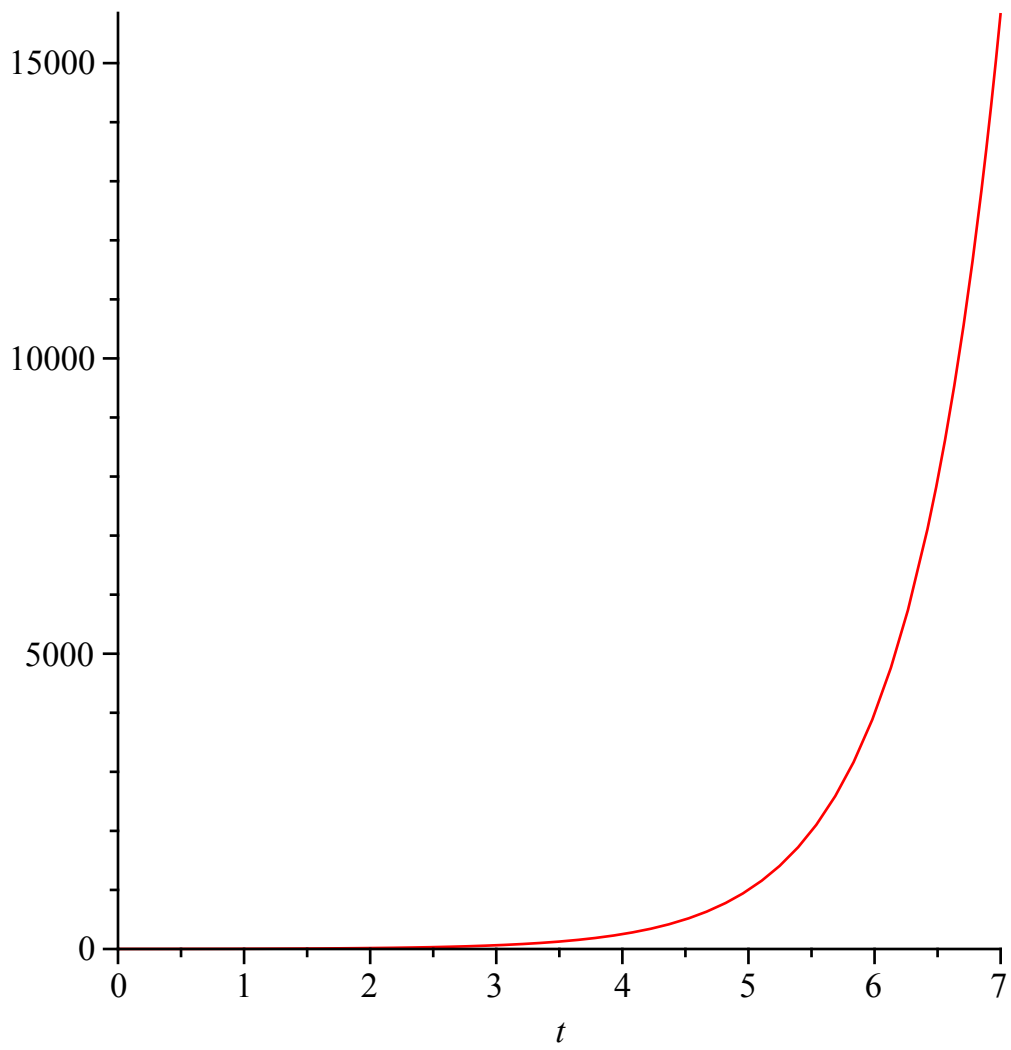


```

> restart
> Ecuacion := diff(P(t), t) = K·P(t)
                                Ecuacion :=  $\frac{d}{dt} P(t) = K P(t)$  (1)
> Condiciones := P(0) = 1
                                Condiciones :=  $P(0) = 1$  (2)
> SolucionGeneral := dsolve(Ecuacion)
                                SolucionGeneral :=  $P(t) = \_C1 e^{K t}$  (3)
> SolucionParticular := dsolve({Ecuacion, Condiciones})
                                SolucionParticular :=  $P(t) = e^{K t}$  (4)
> Parametro := isolate(SolucionParticular, K)
                                Parametro :=  $K = \frac{\ln(P(t))}{t}$  (5)
> ValorParametro := subs(t = 5, P(5) = 1000, Parametro)
                                ValorParametro :=  $K = \frac{1}{5} \ln(1000)$  (6)
> SolucionFinal := subs(K = rhs(ValorParametro), SolucionParticular)
                                SolucionFinal :=  $P(t) = e^{\frac{3}{5} \ln(10) t}$  (7)
> Dias10000 := solve(rhs(SolucionFinal) = 10000, t); evalf(%, 5)
                                Dias10000 :=  $\frac{20}{3}$ 
                                6.6667 (8)
> plot(rhs(SolucionFinal), t = 0 .. 7)

```



```
> plot(rhs(SolucionFinal), t=0..0.6)
```

