```
> restart
> Sistema1 := diff(x[1](t), t) = 2·x[1](t) + 3·x[2](t), diff(x[2](t), t) = x[1](t) + 4·x[2](t) :
      Sistema1[1]; Sistema1[2]
```

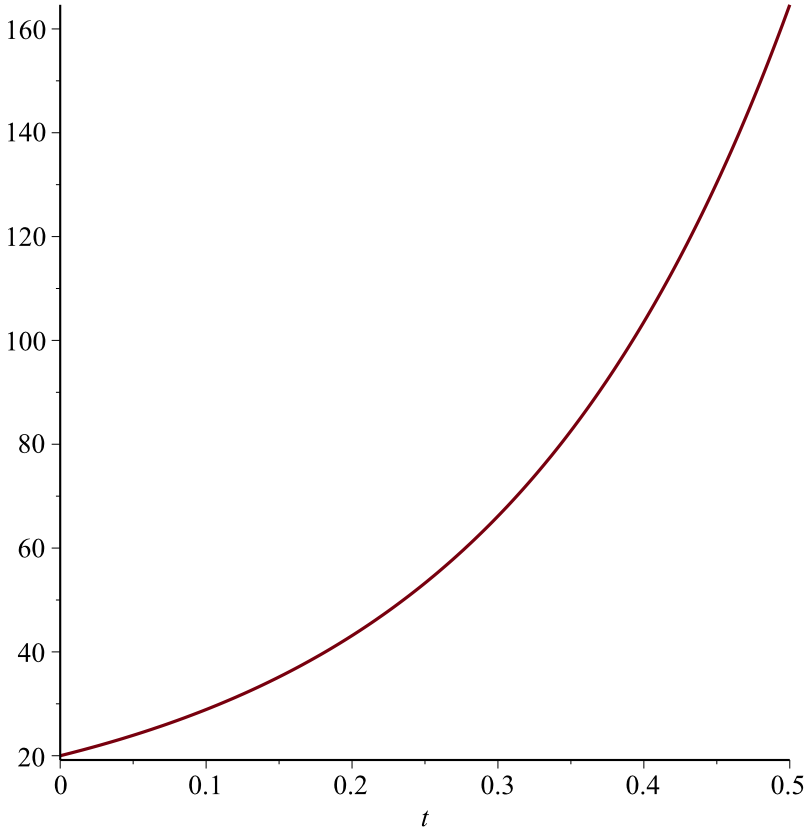
$$\frac{d}{dt} x_1(t) = 2\,x_1(t) + 3\,x_2(t)$$

$$\frac{d}{dt} x_2(t) = x_1(t) + 4\,x_2(t) \qquad \textbf{(1)}$$

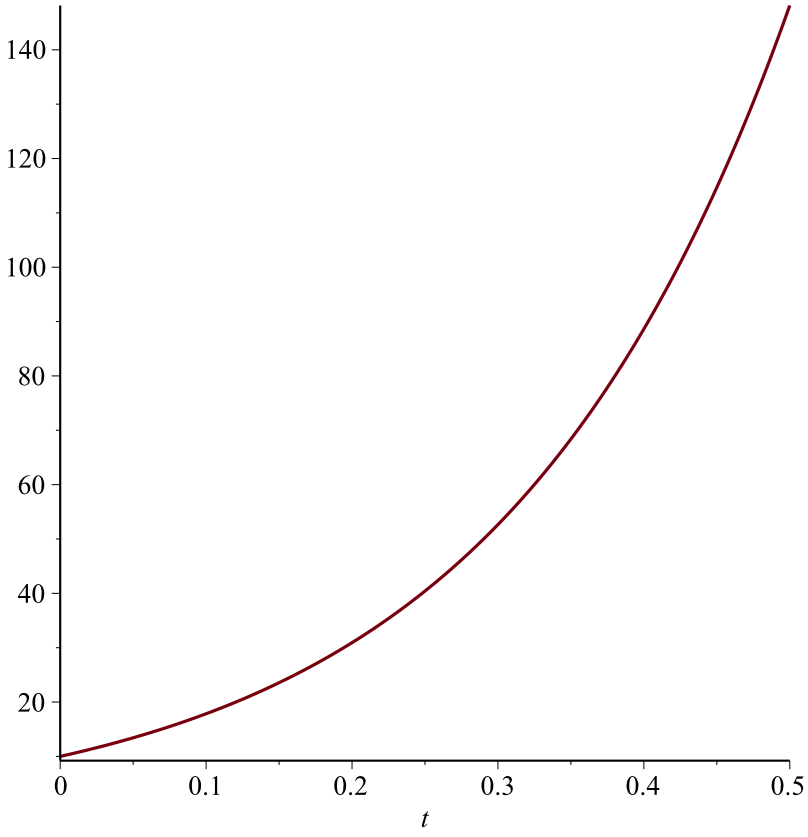
```
> Cond := x[1](0) = 20, x[2](0) = 10
```

$$Cond := x_1(0) = 20,\ x_2(0) = 10 \qquad \textbf{(2)}$$

```
> Solucion1 := dsolve({Sistema1, Cond}, {x[1](t), x[2](t)}) :
> plot(rhs(Solucion1[1]), t = 0..0.5)
```




```
> plot(rhs(Solucion1[2]), t = 0..0.5)
```



> *Solucion1*[1]; *Solucion1*[2]

$$x_1(t) = \frac{25}{2}\, e^{5t} + \frac{15}{2}\, e^{t}$$

$$x_2(t) = \frac{25}{2}\, e^{5t} - \frac{5}{2}\, e^{t} \qquad \textbf{(3)}$$

>

>