```
> restart
> Ecuacion := diff(y(t), t$2) =- 98094/10000
```

$$Ecuacion := \frac{d^2}{dt^2} y(t) = -\frac{49047}{5000} \quad (1)$$

```
> Condiciones := y(0) = 21/10, D(y)(0) = 0
```

$$Condiciones := y(0) = \frac{21}{10}, D(y)(0) = 0 \quad (2)$$

```
> SolucionGeneral := dsolve(Ecuacion)
```

$$SolucionGeneral := y(t) = -\frac{49047}{10000} t^2 + _C1\, t + _C2 \quad (3)$$

```
> SolucionParticular := dsolve({Ecuacion, Condiciones})
```

$$SolucionParticular := y(t) = -\frac{49047}{10000} t^2 + \frac{21}{10} \quad (4)$$

```
> TiempoRecorrido := solve(rhs(SolucionParticular) = 0, t); evalf(%, 4)
```

$$TiempoRecorrido := -\frac{10}{16349}\sqrt{1144430}, \frac{10}{16349}\sqrt{1144430}$$

$$-0.6545, 0.6545 \quad (5)$$

```
> DerivadaSolucionParticular := diff(SolucionParticular, t)
```

$$DerivadaSolucionParticular := \frac{d}{dt} y(t) = -\frac{49047}{5000} t \quad (6)$$

```
> Velocidad := subs(t = TiempoRecorrido[2], rhs(DerivadaSolucionParticular)); evalf(%, 4);
  evalf(%%, 4)·3.6
```

$$Velocidad := -\frac{3}{500}\sqrt{1144430}$$

$$-6.420$$

$$-23.1120 \quad (7)$$

```
>
>
>
>
```