

```
In[ ]:= DSolve[{l'[t] == -I*(l[t]/2)*c1 - (1/2)*m[t],
               m'[t] == (1/2)*l[t]*c1^2 - (I/2)*m[t]*c1}, {l[t], m[t]}, t]
```

```
Out[ ]:= { {l[t] -> 1/2 e^{-i c1 t} (1 + e^{i c1 t}) C[1] + i e^{-i c1 t} (-1 + e^{i c1 t}) C[2]/(2 c1),
            m[t] -> -1/2 i c1 e^{-i c1 t} (-1 + e^{i c1 t}) C[1] + 1/2 e^{-i c1 t} (1 + e^{i c1 t}) C[2]} }
```

```
In[ ]:= 1/2 e^{-i c1 t} (1 + e^{i c1 t}) C[1] + i e^{-i c1 t} (-1 + e^{i c1 t}) C[2]/(2 c1)
```

```
Out[ ]:= 1/2 e^{-i c1 t} (1 + e^{i c1 t}) C[1] + i e^{-i c1 t} (-1 + e^{i c1 t}) C[2]/(2 c1)
```

```
In[ ]:= Expand[1/2 e^{-i c1 t} (1 + e^{i c1 t}) C[1] + i e^{-i c1 t} (-1 + e^{i c1 t}) C[2]/(2 c1)]
```

```
Out[ ]:= C[1]/2 + 1/2 e^{-i c1 t} C[1] + i C[2]/(2 c1) - i e^{-i c1 t} C[2]/(2 c1)
```

```
In[ ]:= Collect[%, Exp[-I*c1*t]]
```

```
Out[ ]:= C[1]/2 + i C[2]/(2 c1) + e^{-i c1 t} (C[1]/2 - i C[2]/(2 c1))
```