

### Damped Harmonic Oscillator Plot

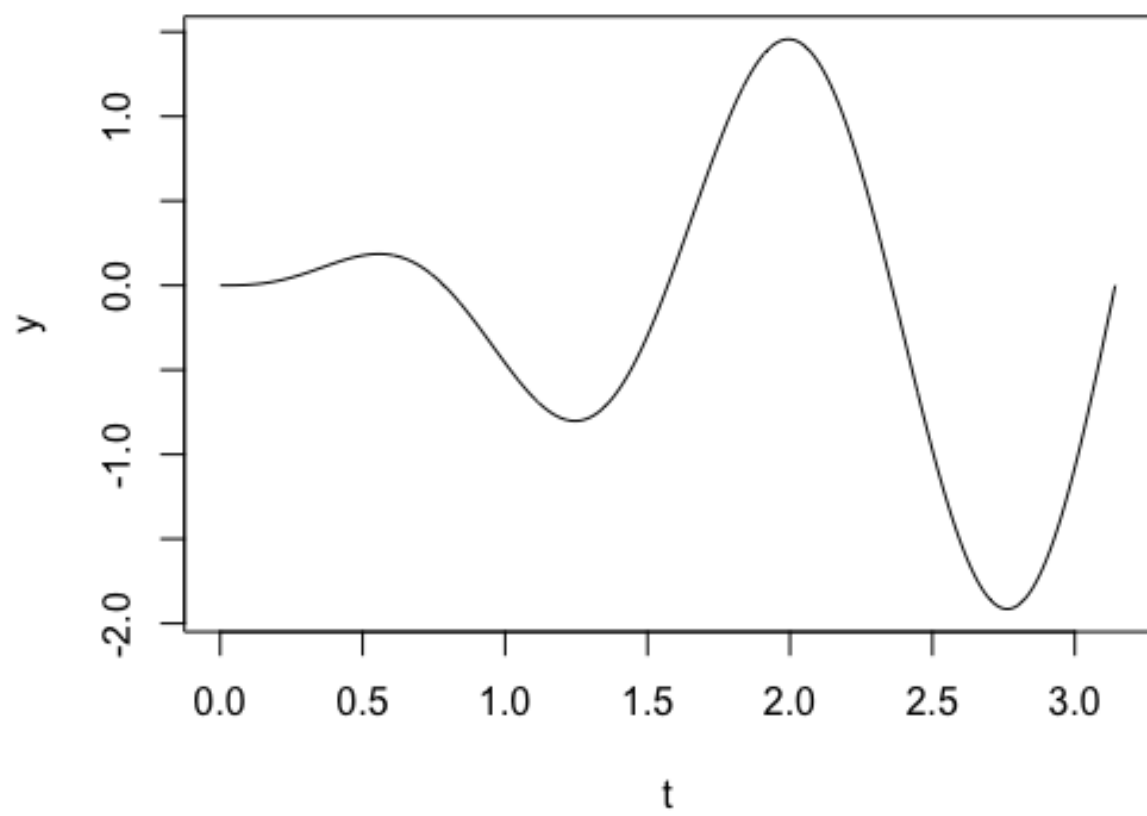
The purpose of this exercise is to write the user-defined **R** function `dhoplot.m` that takes as an input from the user a value  $T$  then plots the function

$$y = t^2 e^{-t/2} \sin(4t) \tag{1}$$

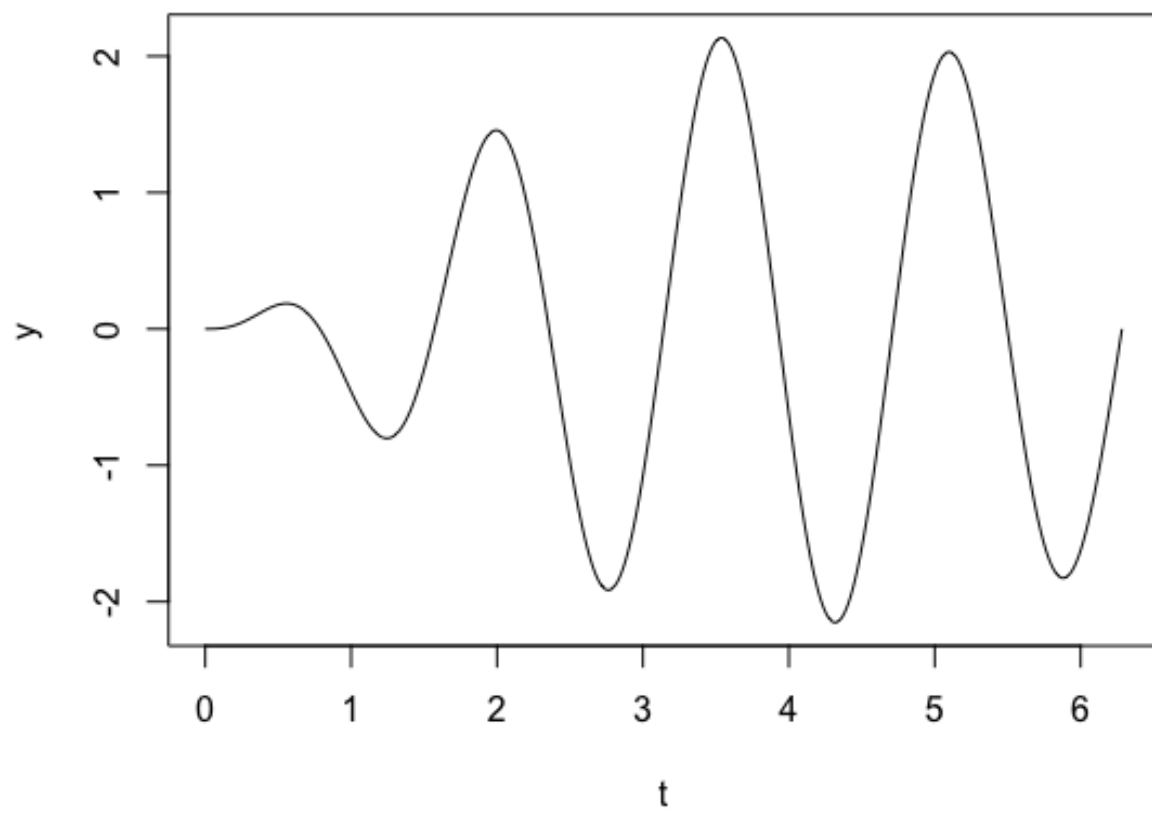
on the interval  $[0, T]$ .

Here are several examples.

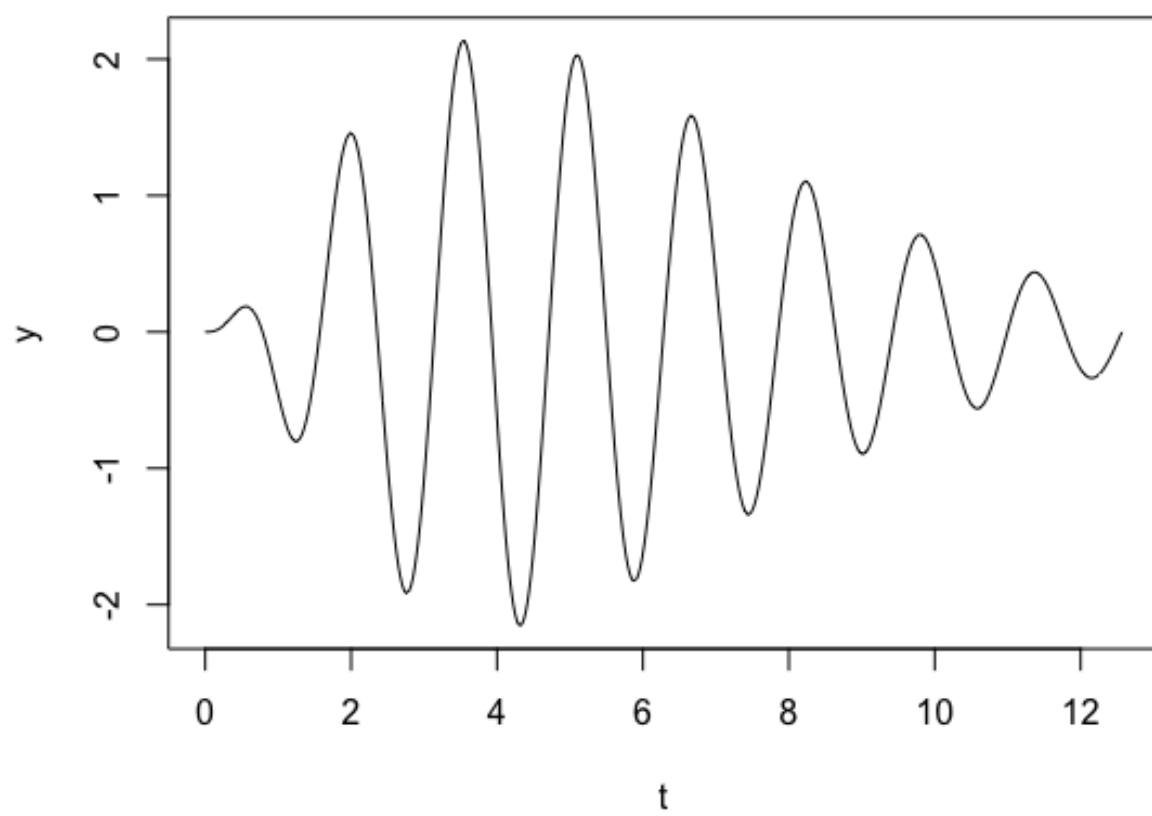
```
>> dhoplot(pi)
```



```
>> dhoplot(2*pi)
```



```
>> dhoplot(4*pi)
```



```
>> dhoplot(pi)
```

